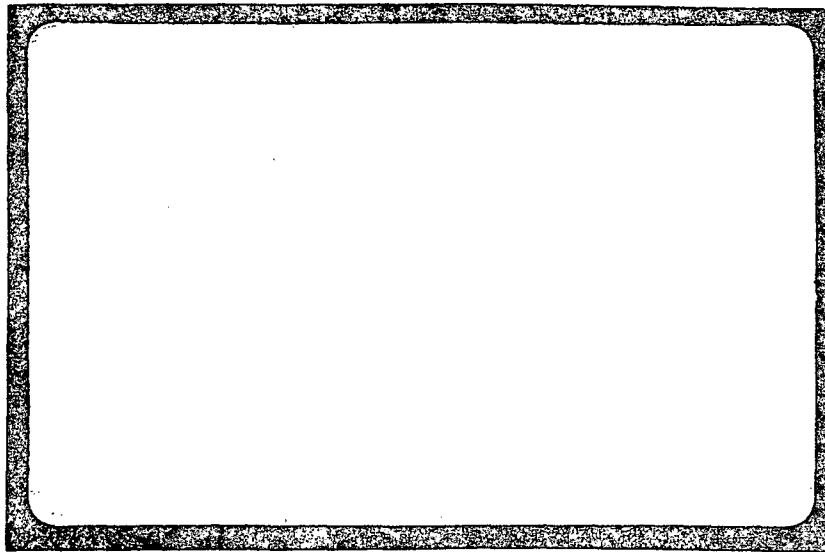




118652

CanonieEnvironmental



September 1992

90-198

FINAL REPORT
INTERIM REMEDY FOR FIRST
OPERABLE UNIT
SCIENTIFIC CHEMICAL PROCESSING
SUPERFUND SITE AT
216 PATERSON PLANK ROAD
CARLSTADT, NEW JERSEY

TABLE OF CONTENTS

	<u>PAGE</u>
LIST OF TABLES	i
LIST OF APPENDICES	ii
1.0 INTRODUCTION	1
2.0 CHRONOLOGY OF EVENTS	5
3.0 CONSTRUCTION ACTIVITIES	7
3.1 Site Mobilization	7
3.2 Slurry Wall	7
3.3 Sheet Pile Wall	8
3.4 Infiltration Barrier	8
3.5 Dewatering System	9
3.6 Fencing	10
3.7 Demobilization	10
4.0 MODIFICATIONS TO IRRDR	11
5.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY ASSUR- ANCE AND QUALITY CONTROL	12
6.0 HEALTH AND SAFETY	13
7.0 FINAL INSPECTION	15
8.0 CERTIFICATION THAT REMEDY IS OPERATIONAL AND FUNCTIONAL	16
9.0 OPERATIONS AND MAINTENANCE	17
TABLES	
APPENDICES	

LIST OF APPENDICES

<u>Appendix</u>	<u>Title</u>
A	Approved Modification Requests/Approvals/Advisory Notes
B	Quality Assurance/Quality Control Reports
C	Well Reclassification
D	Weekly Progress Minutes
E	As Built Drawings
F	LESI Progress Reports - July and August 1992

FINAL REPORT
INTERIM REMEDY FOR FIRST OPERABLE UNIT
SCIENTIFIC CHEMICAL PROCESSING
SUPERFUND SITE AT 216 PATERSON PLANK ROAD
CARLSTADT, NEW JERSEY

1.0 INTRODUCTION

The Scientific Chemical Processing Carlstadt site (Site) is located at 216 Paterson Plank Road, in the borough of Carlstadt, Bergen County, New Jersey. The Site which covers approximately 5.9 acres of land is bounded by Paterson Plank Road on the south; Gotham Parkway on the west; Peach Island Creek, a tributary to Berry's Creek on the north; and a trucking company on the east.

The Site was operated during the 1970s by Scientific Chemical Processing, Inc., for the handling, treatment and disposal of a wide variety of industrial and chemical wastes. Similar operations also occurred on the Site prior to 1970. In 1980, operations at the facility ceased. In 1983, the Site was placed on the U.S. Environmental Protection Agency's (EPA) National Priorities List.

The remedial investigation (RI) results indicate that a wide variety of contaminants, including volatile organic compounds (VOCs), acid extractable compounds, base/neutral compounds, PCBs, metals, petroleum hydrocarbons and pesticides were detected at high levels at all soil depths sampled. The RI also identified three aquifers at the Site: the water table, the till aquifer, and the bedrock aquifer. Similarly, the RI results demonstrated severe contamination of the shallow water table aquifer and migration of hazardous substances down into the till and bedrock aquifers. Contaminants detected in the water table aquifer included volatile organic compounds, semi-volatile organic compounds, pesticides, PCBs, and metals. Many of the hazardous substances found in the water table aquifer are identical to those detected in soils in the FOU zone. Surface water and sediment in Peach Island Creek, which

flows adjacent to the site, are also contaminated with hazardous substances similar in type and/or identical to those which were found in the soils and groundwater at the site.

The RI did not fully define the extent of contamination in off-site areas, the bedrock aquifer and in surface water bodies. Such characterization will be the subject of further future investigation.

The Site is extremely complex, because of the wide variety of contaminants present, the high concentrations of contaminants detected, and the many potential migration routes for these contaminants. Consequently, EPA has divided the response actions for the Site into several operable units (OUs). The OUs for the Site are defined as follows:

- OU1: This OU addresses remediation of conditions in the first operable unit (FOU) zone at the site, including remediation of contaminated soils and ground water above the clay layer at the site; and,
- OU2: This OU will address remediation of conditions outside the FOU zone, including remediation of the contamination in the till and bedrock aquifers and Peach Island Creek.

On September 14, 1990, EPA issued a record of decision selecting an interim remedy for the FOU to reduce contaminant migration from the Site until a permanent remedy is implemented. The interim remedy selected in this decision document contains the following components:

1. Installation of a slurry wall around the entire Site and a temporary infiltration barrier over the Site;
2. Installation of a ground water collection system and extraction of ground water from the first operable unit zone within the slurry wall to maintain the water level in this zone at the lowest practicable level;
3. Transportation of all extracted ground water to an appropriate off-site facility (or facilities) for treatment and/or disposal;
4. Maintenance of fencing and provision of other Site security measure(s), as deemed necessary by EPA, until such time that the final remedy is in place; and
5. Operation and maintenance of the components of this interim remedy and environmental monitoring to ensure continued achievement of the objectives of the interim remedy.

For a complete description of the Interim Remedy, site conditions and scope of work, the reader is referred to the Interim Remedy Remedial Design Report (IRRDR) dated 19 July 1991 and modifications thereto.

EPA intends to issue one or more Records of Decision in the future relating to this site. These Records of Decision will select those final remedial actions for addressing the soils in the first operable unit zone, as well as any areas located outside this zone which may have been adversely affected by the migration of hazardous substances and/or pollutants and contaminants from the Site.

This Final Report provides a summary of the work that was performed for the remedial construction of the Interim Remedy for the FOU. This Final Report also documents any changes or modifications to the approved IRRDR and provides as-built plans for the completed construction work.

Remedial construction was performed by Canonie Environmental Services Corp. (Canonie) under contract to and was funded by the Cooperating Potential Responsible Party (PRP) Group. The PRP Group retained Dr. Donald J. Murphy of Langan Environmental Services, Inc. (LESI) to function as Facility Coordinator and to perform oversight of Canonie's work. The EPA also had representatives on-site throughout all the remedial construction activities for oversight of the remedial construction.

The Final Report is organized into the following sections:

- 1.0 Introduction
- 2.0 Chronology of Events
- 3.0 Construction Activities
- 4.0 Modifications to IRRDR
- 5.0 Performance Standards and Construction QA/QC
- 6.0 Health and Safety
- 7.0 Final Inspection
- 8.0 Certification That Remedy is Operational and Functional
- 9.0 Operations and Maintenance

2.0 CHRONOLOGY OF EVENTS

This section provides a chronology of the major events associated with the construction of the Interim Remedy for the FOU at the Site.

1. EPA's issuance of Record of Decision - September 14, 1990.
2. EPA's issuance of Unilateral Administrative Order - September 28, 1990.
3. Submittal to EPA of draft Interim Remedy Remedial Design Work Plan (IRRDWP) - December 10, 1990.
4. EPA provides comments on draft IRRDWP - March 8, 1991.
5. Revised draft IRRDWP submitted to EPA - March 22, 1991.
6. EPA approval of IRRDWP - April 5, 1991.
7. Submittal of draft Interim Remedy Design Report (IRRDR) to EPA - May 20, 1991.
8. EPA provides comments on draft IRRDR - July 5, 1991.
9. Revised draft IRRDR submitted to EPA - July 22, 1991.
10. EPA approval of IRRDR - August 16, 1991.

11. Commencement of on-site mobilization for construction of interim remedy - August 19, 1991.
12. Approximate Interim Remedy construction completion and dewatering system testing/start-up - June 17, 1991.

3.0 CONSTRUCTION ACTIVITIES

The Interim Remedy called for the construction of an "upgraded" slurry wall around the perimeter of the site, installation of an infiltration barrier across the site, and installation of a ground water extraction system for dewatering of the FOU zone. Each of these items and any associated work tasks are described in the following sections. The schedule showing the approximate dates of construction for the various work tasks is given in Table 1.

3.1 Site Mobilization

Upon receipt of approval of the IRRDR, the work commenced with mobilization to the site. Site mobilization included construction of the support zone, decontamination zone, and the staging area. Once site mobilization activities were completed, construction activities began.

3.2 Slurry Wall

An "upgraded" slurry wall was constructed along the perimeter of the entire site to isolate the FOU zone. The "upgraded" slurry wall involved the installation of a conventional soil/bentonite slurry wall with a high density polyethylene (HDPE) membrane inserted vertically through the center of the completed slurry wall.

The total length of the slurry wall installed at the site was 1,890 feet. The depth of the slurry wall ranged from 11.8 feet to 18.8 feet. The final alignment of the slurry wall is shown on Sheet 4 and the depth of the slurry wall is shown on Sheet 5 and Sheet 6 of the as-built drawings.

Quality assurance/quality control (QA/QC) testing performed throughout the construction of the slurry wall verified that each of the specified parameters was within the established requirements. The QA/QC results are described more fully in Section 5.0 and a summary of these results is found in Table 2.

3.3 Sheet Pile Wall

A steel sheet pile wall was constructed along Peach Island Creek to facilitate installation of the slurry wall. Subsurface debris was encountered at several locations along the alignment of the sheet pile wall. This subsurface debris created obstructions which caused difficulties during installation of the sheet pile. Obstructions near the surface (0 to 3 feet) were removed. Deeper obstructions (3 to 5 feet) were displaced (by using the bucket of the backhoe) to allow the sheet pile to be driven to design depths.

The actual depth of installation of the sheet pile wall is shown on Sheet 8. Deflection in the top of the sheet pile wall occurred at three locations after its construction. Details of this deflection and the approved restoration plan were described fully in Modification Request Number 18 (see Appendix A). The sheet pile restoration plan was performed in accordance with Modification Request 18.

3.4 Infiltration Barrier

After completion of the construction of the slurry wall, an infiltration barrier was installed across the entire surface of the site. The total area coverage of the infiltration barrier is 238,285 square feet.

Prior to installation of the infiltration barrier, considerable effort was expended to prepare the subgrade which consisted of site soils and spoils from the slurry wall trench. These soils were graded and proof rolled prior to installation of the geotextile and infiltration barrier. Additional details on quality control are given in Section 5.0.

The weighting system for the infiltration barrier was modified to use water-filled HDPE tubes in lieu of a sand bag ballast system. This approved change was described in Modification Request Number 25 (see Appendix A).

3.5 Dewatering System

A dewatering system was installed for removal of the ground water from the FOU zone. The dewatering system included installation of electrical submersible pumps in seven wells, construction of a piping system, and installation of a holding tank. The use of electrical well pumps was approved in Modification Request Number 10 (see Appendix A) prior to construction of the dewatering system. Modifications were made to five existing on-site monitoring wells to convert them to ground water extraction wells. In addition, two new wells were drilled to replace the monitoring wells damaged during construction. All seven wells were re-classified as extraction wells with the New Jersey Department of Environmental Protection and Energy. Copies of the re-classification documents are provided in Appendix C. Four on-site piezometers were sealed and the remaining ten piezometers were modified, repaired, or replaced to ensure proper operation after construction was completed. Additional details may be found in the January 1992 Quality Assurance/Quality Control Report in Appendix B and in Modification Request Numbers 2 and 21 (see Appendix A). The system was tested and placed in operation on June 17, 1992.

3.6 Fencing

A new chain link fence was installed around the entire perimeter of the site. The fence included three strands of barb wire at the top. Access gates were provided at six locations as shown on Sheet 9.

3.7 Demobilization

Demobilization of equipment occurred at various times during the work when specific tasks were completed. Demobilization of equipment and articles used in the exclusion zone included decontamination of the equipment, verification by the site health and safety officer and transport of the equipment off-site. All equipment and materials were demobilized from the site with the exception of a single office trailer (that was left for convenience during the quarterly monitoring), spare ballast tubes and liner materials for maintenance of the infiltration barrier system.

4.0 MODIFICATIONS TO IRRDR

Changes to the approved IRRDR were documented during construction by a formal written modification request procedure. Table 3 provides a summary listing of each of the modification requests. Copies of approved modification requests are given in Appendix A. LESI's request letters and EPA's approval letters are included also.

Each approved modification request provides a description of the change(s) from the approved plans and specifications and reason for each of the modifications. The reader is referred to Appendix A for a complete description of each approved modification request. Also included in Appendix A are the advisory notes furnished to the EPA to clarify minor changes that did not require formal requests for modification.

5.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL

The purpose of the Interim Remedy, as indicated in the Record of Decision dated 14 September 1990, is to reduce the migration of contamination from the Site until a permanent remedy is implemented

The FOU zone has been contained by a perimeter slurry wall and a surficial infiltration barrier. Contaminated ground water will continue to be extracted from the FOU via the dewatering system to achieve and continuously maintain the water level in the FOU zone at the lowest practicable level. The extracted water is transported to the DuPont facility in Deepwater, New Jersey for treatment and disposal.

Operation and maintenance of the components of the Interim Remedy and environmental monitoring to assure continued achievement of the objectives of the Interim Remedy will be performed as required by the approved IRRDR. Section 9.0 of this Final Report provides a summary of such activities. Design details, specifications, and performance standards for the Interim Remedy are provided in the IRRDR.

Quality Assurance/Quality Control (QA/QC) as specified in the approved IRRDR was performed throughout the remedial construction. Canonie maintained a full-time QA officer on-site throughout activities for this purpose. Monthly QA/QC reports were issued to Canonie's project manager. Copies of these QA/QC reports are provided in Appendix B.

The QA/QC results were also discussed and presented at each of the weekly progress meetings throughout the project to show that compliance with the approved IRRDR was being accomplished. Minutes of the weekly progress meetings are provided in Appendix D. These results were formally reported in the monthly QA/QC reports.

6.0 HEALTH AND SAFETY

The remedial construction work was performed in accordance with the site-specific Health and Safety Plan. A full-time health and safety officer executed the program, which included standard operating procedures to address physical hazards and air sampling and air monitoring procedures to evaluate and control chemical hazards. The health and safety program successfully addressed the project-related physical hazards. Total manhours worked exceeded 42,000 hours and included work in EPA Level "B," "C" and "D" personal protective equipment (PPE). With regard to physical safety, only two recordable injuries occurred in the course of the project. These injuries consisted of a knee sprain and back sprain experienced by employees of subcontractors.

The air sampling program, as specified in the approved Health and Safety Plan, included personal air sampling and laboratory analysis for target volatile organic compounds (VOCs) and target heavy metals, and the use of a portable gas chromatograph (GC) for on-site analysis of vinyl chloride. A total of 24 personal samples utilizing sampling pumps and charcoal tubes were collected on a weekly basis during intrusive activities. The charcoal tubes were analyzed for nine target compounds. Table 4 shows the maximum concentration obtained by personal samples for each of the target compounds. All of the laboratory-analyzed personal samples revealed air concentrations of target compounds below established permissible exposure limits (PELs).

A total of 10 personal samples utilizing sampling pumps and filter cassettes were collected every other week during excavation activities. These samples were analyzed for copper, chromium, and lead. Table 5 shows the maximum concentration obtained

for each of the metals. All of the laboratory-analyzed personal samples revealed air concentrations of target compounds below established PELs.

A total of 98 breathing air samples were collected and analyzed by the on-site portable GC. Vinyl chloride was detected in 12 of the 98 samples. The maximum concentration measured was 0.14 parts per million (ppm). The results of the on-site GC revealed air concentrations for vinyl chloride that were below the OSHA PEL of 1.0 ppm for vinyl chloride.

Air monitoring utilizing direct reading instruments for VOCs and particulates was also conducted throughout remedial activities. Air concentrations of total VOCs in the worker breathing zone ranged from background levels to approximately 20 ppm. Accordingly, levels of PPE ranged from Level D to Level B in accordance with the action levels established in the Health and Safety Plan. Level B was utilized during excavation of the slurry wall and during some portions of site grading and recontouring when indicated by the direct reading instruments. Emissions control measures were implemented when elevated airborne VOC levels occurred. These measures included limiting the rate of soil excavation/grading along with the application of foam, water and/or slurry.

7.0 FINAL INSPECTION

Site walkovers and completion "punch list" checking were completed by representatives of LESI on several occasions during July and August 1992. LESI's final inspection was completed at the conclusion of a site walkover by Mark Seel of LESI and Curt DeWolf of Canonie on 27 August 1992. As of that date, LESI considered construction of the interim remedy to be complete.

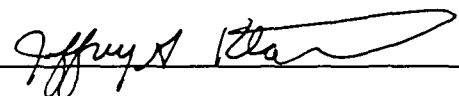
8.0 CERTIFICATION THAT REMEDY IS OPERATIONAL AND FUNCTIONAL

Based on the aforementioned final inspection, on the results of initial ground water level measurements, and on an evaluation of the volume of water pumped and the days of pumping (as provided to EPA in LESI's monthly progress reports of July and August 1992 - copies of these are provided in Appendix E), Langan Environmental Services, Inc., as Facility Coordinator, certifies that the Interim Remedy for the FOU at the Scientific Chemical Processing Site is operational and functional.

Certified By: Langan Environmental Services, Inc.
Facility Coordinator
Donald J. Murphy, P.E.



: Canonie Environmental Services Corp.
Jeffrey A. Klaiber, P.E.
Project Manager



Date: 25 September 1992

9.0 OPERATIONS AND MAINTENANCE

The Operation and Maintenance Plan is included in the IRRDR. Section 5.0 of the Operation and Maintenance Plan was modified in accordance with EPA's July 7, 1992 correspondence to LESI.

In summary, operation and maintenance activities include: quarterly site inspections to assess the condition of the site, dewatering system and infiltration barrier, measuring groundwater levels in monitoring wells and piezometers, collecting and analyzing ground water and surface water samples, and repairs as required. Sampling, analysis and monitoring will be performed on a quarterly basis to monitor the effectiveness of the Interim Remedy.

The operation and maintenance activities will be performed by LESI. If any potential Interim Remedy operation problems, as described in Section 4.0 of the Operation and Maintenance Plan, are discovered, they will be resolved by Canonie Environmental Services Corp. as directed by LESI.

LESI, on behalf of the Cooperating PRPs, will report to EPA on these activities by means of monthly and quarterly reports as required by Section 7.0 of the Operation and Maintenance Plan.

[illegible]

PROJECT SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR

COOPERATING PRP GROUP

CanonieEnvironmental




DATE: 2-1-92
SCALE: NONE

TABLE 1

DRAWING NUMBER
90-198-B72

16	9/5/92	REISSUED FINAL	J.M.R.	SDP	
15	7-15-92	UPDATED 7-15-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.P.	M.K.J.	J.E.M.
14	6-5-92	UPDATED 6-3-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WLH	M.K.J.	J.E.M.
13	5-8-92	UPDATED 5-6-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.M.R.	M.K.J.	J.E.M.
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

LEGEND:

 INACTIVE
 CRITICAL ACTIVITY
 PROGRESS BAR

NOTES:

1. THE SCHEDULE FOR TASKS SHOWN IN 1992 IS BASED ON THE UNILATERALLY REQUIRED SCHEDULE MILESTONES GIVEN IN THE EPA'S MARCH 23, 1992 LETTER.
2. WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND/OR DEFLECTED SHEETPILE PROBLEM.
3. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

TABLE 2
SUMMARY OF QUALITY CONTROL TEST RESULTS
FOR SLURRY & BACKFILL MATERIAL

Date Note 1	Slurry Entering Trench			Slurry In Trench		Backfill Material		
	Viscosity (sec)	Density (pcf)	pH	Viscosity (sec)	Density (pcf)	Slump (in)	Density (pcf)	Permeability (cm/s)
Specification	> 40	64-80	7-10	> 40	64-80	3-6	15 > Slurry	< 1.0E-07
10/04/91	49.3	64.5	8.5	-	-	-	-	-
10/07/91	80.5	65.2	8.7	79.2	67.0	-	-	-
10/08/91	98.8	65.5	8.8	91.3	67.9	-	-	-
10/09/91	-	-	-	-	-	3.0	-	-
10/10/91	40.2	64.7	8.2	82.3	70.0	3.5	114.0	-
						3.25	107.0	-
10/11/91	41.6	64.5	8.0	64.0	72.3	4.75	116	-
10/12/91	51.0	65.5	8.0	68.0	69.8	4.5	116.0	1.40E-08
	51.0	65.5	8.0	68.0	69.8	5.5	114.5	-
10/14/91	44.9	65.1	8.2	104.6	71.0	6.0	115.5	2.40E-08
10/15/91	44.3	64.8	8.3	162.0	72.0	4.0	124.0	-
10/16/91	42.5	64.9	8.0	> 6 min	71.0	4.5	-	-
10/17/91	46.5	65.0	8.1	> 6 min	78.0	4.0	118.0	3.40E-08
10/18/91	42.2	65.0	8.3	> 5 min	75.5	3.0	-	-
10/19/91	42.4	64.9	8.1	> 5 min	76.0	4.8	120.0	-
10/21/91	44.8	65.0	8.0	67.7	71.5	5.0	128.0	4.20E-08
10/22/91	43.8	64.8	8.4	61.8	69.8	-	-	-
						-	-	-
10/23/91	42.5	65.0	8.1	-	-	3.25	-	-
10/24/91	41.8	64.9	8.2	52.5	69.0	3.5	-	-
10/25/91	42.2	64.7	8.3	56.5	70.0	-	-	2.00E-08
10/26/91	40.8	64.0	8.1	55.0	72.5	3.5	121.0	-
10/28/91	40.8	64.8	8.0	64.3	73.5	3.25	-	2.40E-08
10/29/91	41.8	64.5	8.2	163.1	78.0	4.25	-	-
10/30/91	41.6	64.8	8.0	-	-	-	-	2.20E-08
11/14/91	40.8	64.5	8.1	65.2	68.0	3.0	-	-
11/15/91	40.2	64.3	8.2	108	69.0	4.75	-	-
11/16/91	40.2	65.0	8.1	130	76.0	3.5	125.0	-
11/18/91	40.3	64.5	8.1	128	71.0	4.0	-	4.70E-08
11/19/91	40.4	64.5	8.2	135	72.5	-	-	-
11/20/91	40.2	64.5	8.1	141	73.0	5.0	-	6.30E-08
11/21/91	40.9	64.5	8.1	Note 2	75.0	3.25	-	-
11/22/91	40.1	64.5	8.2	Note 2	78.5	-	-	-
11/23/91	-	-	-	Note 2	78.0	5.5	128.5	-
11/25/91	-	-	-	-	-	4.0	-	-
11/26/92	-	-	-	-	-	-	-	6.30E-08

Notes:

- 1) No slurry wall activities took place from October 31, 1991 thru November 13, 1991.
- 2) Clumpy material in slurry sample clogged marsh funnel, unable to run test.

100466

TABLE 3
LIST OF MODIFICATION REQUESTS

<u>Modification Request #</u>	<u>General Description of Change</u>	<u>Date Requested</u>	<u>Date of EPA Approval</u>
1	Extended Staging Area	8/30/91	9/27/91
2	Grout Piezometers 12 & 13	9/10/91	9/27/91
3	Enlarge Decon Pad	9/10/91	9/27/91
4	Modify Staging Area Layout	9/24/91	9/25/91
5	Switching Backfill Mixing Sequence	10/8/91	10/9/91
6	Using Rounded Corners on Slurry Wall	10/9/91	10/11/91
7	Temporarily Relocate Personnel Decon Area	10/18/91	10/18/91
8	Use Existing Building for Decon Area	10/26/91	10/30/91
9	Extended Gundwall 6" to Ground Surface	11/11/91	11/27/91
10	Use of Electric Well Pumps for Dewatering	11/12/91	12/16/91
11	Relocate Decon Pad	11/13/91	11/27/91
12	Raising/Repairs of Piezometers	11/21/91	12/16/91
13	Using Hydrotite Type "T" Joint Sealer	11/21/91	11/25/91
14	Adjustments to Final Grades	11/27/91	12/9/91
15	Cold Weather Seaming of Infiltration Barrier	11/27/91	12/16/91
16	Gundwall Anchor Detail Modification	12/10/91	12/16/91
17	Fence Modification	12/10/91	12/30/92
18	Sheet Pile Restoration Plan	12/20/91	1/10/92
19	FML Anchor Modification	1/10/92	1/14/92
20	Anchor Trench Backfill Material	1/10/92	1/14/92
21	Piezometer P-9 Replacement	1/22/92	2/18/92
22	Schedule Modification	2/4/92	Denied
23	Proctor Testing Request	2/21/92	Withdrawn
24	Temporary Dewatering Operation	2/28/92	3/18/92
25	Membrane Weighting System Modification	4/7/92	4/27/92
26	Tank T-5 Rolloff-Cover Details	4/9/92	4/27/92
27	Deletion of Extraction Wells From Water Level Monitoring Program	4/10/92	4/27/92
28	New Gates for Holding Tank Fence Area	5/1/92	5/19/92
29	Additional HDPE Along Sheet Pile Wall for Erosion Protection	5/1/92	5/19/92
30	Schedule Extension Request	5/14/92	Denied
31	Fence Post Anchoring Along Creek Retracted 6/19/92	5/19/92	Withdrawn
32	Piping Layout Adjustments	6/2/92	6/8/92
33	Holding Tank Level Switch Adjustment	6/2/92	6/8/92
34	Minor Adjustments to Dewatering System	6/23/92	7/1/92
35	Modify Number of Destructive Tests on HDPE Seams	7/23/92	8/17/92

NOTE: Copies of Modification Requests are provided in Appendix A.

100467

CanonieEnvironmental

TABLE 4
PERSONAL SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS
MAXIMUM CONCENTRATION DETECTED

Number of Samples Collected: 24

<u>Substance</u>	<u>Maximum Concentra- tion⁽¹⁾ (ppm)</u>	<u>PEL (ppm)⁽²⁾</u>
Vinyl chloride	0.081	1
Benzene	0.036	1
Trichlorethylene	0.498	50
Tetrachloroethylene	0.174	25
Chloroform	0.470	10
Dichloromethane	Never Detected	500
Toluene	0.921	100
Ethylbenzene	0.062	100
<i>m/p</i> Xylene	0.234	100
<i>o</i> Xylene	0.069	100

Notes:

⁽¹⁾ Samples collected as per National Institute of Occupational Safety and Health (NIOSH) Methods (1501, 1003) utilizing (coconut shell) charcoal solid sorbent tubes, analysis by gas chromatography.

⁽²⁾ PEL = OSHA Permissible Exposure Limit, expressed as an 8-hour, time-weighted average

ppm = Parts Per Million

TABLE 5
PERSONAL SAMPLING RESULTS FOR HEAVY METALS
MAXIMUM CONCENTRATION DETECTED

Number of Samples Collected: 10

<u>Metal</u>	<u>Maximum Concentra- tion⁽¹⁾ (ug/M³)</u>	<u>PEL (ug/M³)⁽²⁾</u>
Copper	1.7	1,000
Chromium	0.33	500
Lead	Never Detected	50

Notes:

⁽¹⁾ Samples collected as per National Institute of Occupational Safety and Health (NIOSH) Methods (7029, 7024, 7082) utilizing (0.8 - um, cellulose ester membrane filters), analysis by Atomic Absorption.

⁽²⁾ PEL = OSHA Permissible Exposure Limit, expressed as an 8-hour, time-weighted average.

ug/M³ = Micrograms Per Cubic Meter.

APPENDIX A

APPROVED MODIFICATION REQUESTS/APPROVALS/ADVISORY NOTES



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
PALM BEACH, FL

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

3 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

6 September 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 1
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Before the site meeting on 3 September 1991, Pat Evangelista and I discussed a Proposed Staging Area Modification requested by our contractor, Canonie Environmental and agreed that the requested change seems appropriate. The requested change is described in the attached letter of 30 August 1991 from Frank J. Gontowski of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of this change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

**Dr. Donald J. Murphy, P.E.
President**

**DJM:mg
Attachment**

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site**
- 2) Mr. W.L. Warren - CSPS&C**

100472



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL

cy... 9/27/91

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

18 September 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modifications No. 1, No. 2 and No. 3
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Before and/or after site meetings on 3, 10, and 17 September 1991, Pat Evangelista and I (and/or my colleague, Gerard M. Coscia) discussed three modifications requested by our contractor, Canonie Environmental and agreed that the requested changes seem appropriate. The requested changes are described in the attached letters/memos of 30 August, 10 September, and 10 September 1991 from Frank J. Gontowski of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of these changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100473

**Langan
Environmental
Services, Inc.**

Paterson Plank Road Site
216 Paterson Plank Road
Carlstadt, NJ 07003
Tel: 201-261-1100
Fax: 201-261-1101

24 September 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 4
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

At the site meeting on 24 September 1991, Pat Evangelista and my colleague, Gerard M. Coscia, discussed modifications requested by our contractor, Canonie Environmental and agreed that the requested changes seem appropriate. The requested changes are described in the attached letter of 24 September 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of these changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W. PALM BEACH, FL

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

8 October 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 5
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

A modification requested by our contractor, Canonie Environmental, is described in the attached letter of 8 October 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of these changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100475



ELMWOOD PARK, N.J.
NEW YORK, N.Y.
MIAMI, FL
PALM BEACH, FL

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

3 Penn Plaza, Suite 1600
New York, NY 10121
(212) 432-7555

10 October 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 6
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

A modification requested by our contractor, Canonie Environmental, is described in the attached letter of 9 October 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of this change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

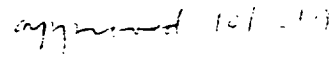
Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100476



4000 N. 10th Street, Suite 100
 Phoenix, AZ 85018
 Tel: 602.955.8888
 Fax: 602.955.8889
 Email: info@phoenixcancercenter.com

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

Gentlemen:

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of this change.

LANGAN ENVIRONMENTAL SERVICES, INC.

Donald J. Murphy

DJM:mg
Attachments

- 100477



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
PALM BEACH, FL

approved 10/2/91

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

28 October 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 8
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

A modification requested by our contractor, Canonie Environmental, is described in the attached letter of 26 October 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of this change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100478

**Langan
Environmental
Services, Inc.**

Ever Drive Center I
Elmwood Park, NJ 07417
(201) 734-6969

1 Penn Plaza, Suite 1500
New York, NY 10119
(212) 452-7855

approved 11/17/91

13 November 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 9
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 11 November 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



Langan
Environmental
Services, Inc.

14 November 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 10
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested changes are described in the attached letter of 12 November 1991 from Joseph Mihm of Canonie to me. I have enclosed 8 copies of the proposed IRRDR revisions (another 4 copies were sent to NJDEPE).

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C (2 copies)

100480



ELMWOOD PARK NJ
NEW YORK, NY
MIAMI FL
W PALM BEACH FL

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

27 November 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 10
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

During a telephone conversation on 22 November 1991, you indicated that USEPA and NJDEPE have a few questions/comments/requests relative to Canonie's request to use electric rather than pneumatic pumps.

Canonie's responses are attached.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100481



**Langan
Environmental
Services, Inc.**

800 WOOD PARK RD.
NEW YORK, NY 10024
212 734-6969

1 Penn Plaza, Suite 1600
New York, NY 10119
212 432-7335

14 November 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 11
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonic Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 13 November 1991 from Joseph Mihm of Canonic to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C (2 copies)

100482

**Langan
Environmental
Services, Inc.**

Attn: Project Manager - 216 Paterson Plank Road Site
New Jersey
07041-1000

22 November 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 12
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 21 November 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

**Langan
Environmental
Services, Inc.**

Attn: Chief, Compliance
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

3 January 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 12 - Addendum 1
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

In response to your letter of 24 December 1991, concerning replacement of monitoring wells MW-1S and MW-6S, our contractor, Canonie Environmental Services, Inc., has prepared this addendum to its request of 21/22 November 1991 for Modification 12 to the approved Interim Remedy Remedial Design Report. The modification is described in the attached letter of 3 January 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of this addendum and of the original (21/22 November 1991) Modification No. 12 request.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C



Langan
Environmental
Services, Inc.

14 January 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modifications No. 12 and 18
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has revised its requests for modifications 12 and 18 to the approved Interim Remedy Remedial Design Report. The requested changes are described in the attached letter of 13 January 1992 from Joseph Mihm of Canonie to me.

As indicated in the letter:

- the revision of Modification Request 12 has to do with using Schedule 5 Type 316 stainless steel casing.
- the revision of Modification Request 18 (the original request already has been approved by the USEPA) has to do with restoring an additional section of the sheetpile wall (Sheets 49 through 57) using the approved method.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the requested changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100485

CML



**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

7 April 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Advisory Note Concerning Modification No. 12
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested a minor adjustment to Modification No. 12 to the approved Interim Remedy Remedial Design Report. The adjustment is described in the attached letter of 3 April 1992 from Joseph Mihm of Canonie to me.

As the adjustment is minor, it appears that a request for formal approval in accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116 is not necessary. Thus, this Advisory Note is furnished for your information.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C
- 3) Mr. J. Mihm - Canonie

100486

**Langan
Environmental
Services, Inc.**

[Faint, illegible text]

22 November 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 13
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 21 November 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W. PALM BEACH, FL

again: 11/9/91

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

27 November 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 14
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 27 November 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100488



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
PALM BEACH, FL

answered 12/16/91

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

2 Penn Plaza, Suite 1500
New York, NY 10121
(212) 432-7885

2 December 1991

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 15
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 27 November 1991 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

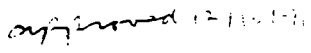
Donald J. Murphy

**Dr. Donald J. Murphy, P.E.
President**

**DJM:mg
Attachments**

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site**
- 2) Mr. W.L. Warren - CSPS&C**

100489

[illegible]

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

Gentlemen:

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

LANGAN ENVIRONMENTAL SERVICES, INC.

Donald Murphy

DJM:mg
Attachments

- 100490



Langan
Environmental
Services, Inc.

10 December 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 17
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of today from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100491

TO: Pat Evangelista - USEPA
INFO: Bill Warren - CSPA&C
FROM: Don Murphy - LSI 19
RE: Modification 17
DATE: 23 December 1991

- 1 - As discussed earlier today, I have had Canonie revise pg A-2, Item 9 of the referenced modification to read "above bottom" rather than "below top".
- 2 - A copy of the revised page follows.

DJM:mg
Attachment

LSI



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

12 May 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Advisory Note Concerning Modification No. 17
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has provided a clarification to Modification No. 17 to the approved Interim Remedy Remedial Design Report. The clarification is described in the attached letter of 11 May 1992 from Joseph Mihm of Canonie to me.

This Advisory Note is furnished for your information.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C
- 3) Mr. J. Mihm - Canonie

100493

**Langan
Environmental
Services, Inc.**

100 West 42nd Street
New York, New York 10018
Tel: (212) 633-1000

100 West 42nd Street
New York, New York 10018
Tel: (212) 633-1000

23 December 1991

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 18
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested a modification to its 31 October 1991 proposal concerning sheetpile wall restoration. The requested change is described in the attached letter of 20 December 1991 from Joseph E. Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



Langan
Environmental
Services, Inc.

1000 Drive Center
Bridgewater, NJ 08807
201-942-4400

200 5th Avenue, Suite 401
New York, NY 10001
212-410-7445

17 January 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Advisory Note: Modification No. 18
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has encountered some difficulty with respect to implementation of Modification No. 18 as originally requested and approved. The approach that must be followed is described in the attached letter of 15 January 1992 from Joseph Mihm of Canonie to me.

As the change is not substantive, it seems to not require formal approval. However, I am forwarding this advisory note for your information and for your files.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



1/14/92

**Langan
Environmental
Services, Inc.**

River Drive Center
Edwood Park, Ill. 60127
(312) 704-9969

330 Elm Avenue, Suite 401
New York, N.Y. 10001
(212) 480-7888

13 January 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification Nos. 19 and 20
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested two additional modifications to the approved IRRDR. The requested changes are described in the attached letters of 10 January 1992 from Joseph E. Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100496

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elimwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

23 January 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 21
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. This request supersedes the request for Modification 2, Revision 1 forwarded to you on 21 January 1992. This modification request is, in essence, a limited revision of approved Modifications 2 and 12. The requested change is described in the attached letter of 22 January 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



**Dr. Donald J. Murphy, P.E.
President**

**DJM:mg
Attachments**

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site**
- 2) Mr. W.L. Warren - CSPA&C**



**Langan
Environmental
Services, Inc.**

River Drive Center 2
Brimwood - NJ 07407
(201) 441-1999

292 5th Avenue, Suite 407
New York, NY 10001
(212) 441-1999

11 March 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 24
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of today from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C
- 3) Mr. J. Mihm - Canonie

100498



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

9 April 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modifications No. 25 and 26
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested two more modifications to the approved Interim Remedy Remedial Design Report as described in the attached letters of 9 April 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116. I request formal written approval of the requested changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C
- 3) Mr. J. Mihm - Canonie

100499



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

22 April 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 25
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

The following letter dated 16 April 1992 from Canonic Environmental Services to me was prepared at the request of Morris Elkins of ICF Kaiser.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C
- 3) Mr. J. Mihm - Canonic

100500



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W. PALM BEACH, FL
DOYLESTOWN, PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

13 April 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 27
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 10 April 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C
- 3) Mr. J. Mihm - Canonie

100501



ELMWOOD PARK NJ
NEW YORK, NY
MIAMI, FL
W PALM BEACH, FL
DOYLESTOWN, PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

1 May 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 28
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 1 May 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100502



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

1 May 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Modification No. 29
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 1 May 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100503



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W. PALM BEACH, FL
DOYLESTOWN, PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

14 May 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 30
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

On 13 May 1992, Mr. P. Evangelista of your staff advised me that it would be necessary to submit a formal modification request with respect to the schedule for completion of construction of the Interim Remedy.

As shown in my recently submitted Progress Report for April 1992 and as indicated in the attached schedule prepared by Canonie Environmental Services, we anticipate completion of start-up of the dewatering system and commencement of transportation of water to DuPont by about 15 June 1992. This is several weeks later than the 22 May 1992 date specified in the schedule set unilaterally by the USEPA on 23 March 1992. The primary reason for the discrepancy is heavy rainfall experienced during several two or three day periods and concomitant soaking of the geotextile that had been laid. This precluded the possibility of sealing seams in the HDPE liner until the geotextile dried sufficiently.

Based on the foregoing, the schedule was changed to that shown on the attached.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site

2) Mr. W.L. Warren - CSPA&C

3) Mr. J. Mihm - Canonie

100504



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

20 May 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modification No. 31
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested another modification to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 19 May 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100505

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

22 June 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Withdrawal Of Request
For Modification No. 31 To The IRRDR**

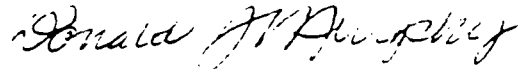
Gentlemen:

As indicated in the attached letter of 19 June 1992 from Mr. J. Mihm, Canonic has withdrawn its request for Modification No. 31 to the IRRDR.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



**Dr. Donald J. Murphy, P.E.
President**

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W. PALM BEACH, FL
DOYLESTOWN, PA

approved 6/4/92

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

3 June 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modifications Nos. 32 and 33
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested modifications 32 and 33 to the approved Interim Remedy Remedial Design Report. The requested changes are described in the attached letters of 2 June 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the requested changes.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100507



**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

24 June 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modifications No. 34
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested modification no. 34 to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 23 June 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the requested change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

**Dr. Donald J. Murphy, P.E.
President**

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C



ELMWOOD PARK NJ
NEW YORK NY
MIAMI FL
W PALM BEACH FL
DOYLESTOWN PA

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

27 July 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Modifications No. 35
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has requested modification no. 35 to the approved Interim Remedy Remedial Design Report. The requested change is described in the attached letter of 23 July 1992 from Joseph Mihm of Canonie to me.

In accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116, I request formal written approval of the requested change.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy (M)

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPA&C

100509

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

27 July 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Advisory Note Concerning Air Pressure Tests
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Our contractor, Canonie Environmental Services, Inc., has provided a clarification to the approved Interim Remedy Remedial Design Report. The clarification is described in the attached letter of 23 July 1992 from Joseph Mihm of Canonie to me.

As the clarification is minor, it appears that a request for formal approval in accordance with Paragraph 166 of Administrative Order No. II CERCLA-00116 is not necessary. Thus, this Advisory Note is furnished for your information.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Donald J. Murphy (MS)

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachments

- cc: 1) Chief, Bureau of Federal Case Management
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C
- 3) Mr. J. Mihm - Canonie

APPROVED MODIFICATION REQUESTS

FIELD MEMO

TO: Mark Seel

90-198

FROM: Frank J. Gontowski

August 30, 1991

MODIFICATION REQUEST No. 1
Staging Area Construction

SCP Carlstadt Superfund Site

Based on field review by our Construction Superintendent, Cliff Cordova, Canonie intends to slightly adjust the layout of the staging area and decontamination pad as shown on the attached sketch. This modification will provide:

- o Additional space for trench spoils in the main gate area;
- o Increased accessibility to the slurry wall for construction equipment working in the main gate area.

Please notify me of your approval for this modification by noon on Tuesday September 3, 1991.

Attachment

FJG/fjg

cc: Cliff Cordova
Curt DeWolf
Joseph E. Mihm
Pete Porter
Jim Semple

100512

CanonieEnvironmental

SLURRY WALL
ALIGNMENT

NEW PROPOSED A-3
DECONTAMINATION
PAD LOCATION

B-10 APPROVED
DECONTAMINATION
PAD LOCATION

EQUIPMENT DROP
PPE REMOVAL

STA. 8+00

MAIN
GATE

N 9,561
E 10,085

B-9

N 9,661
E 10,048

STA. 6+00

SECOND
GATE

B-8

B-7

N 9,427
E 10,046

STA. 4+00

B-4

STAGING
AREA
(SUPPORT ZONE)

APPROX. LOCATION OF
WELL CLUSTER NO.2

SLURRY WALL
BACKFILL
MIXING AREA

LEGEND

— APPROVED LOCATION

- - - NEW PROPOSED
LOCATION

SCALE: 1"=40'

FIELD MEMO

TO: Mark Seel - Langan Environmental Services, Inc.

90-198

FROM: Frank J. Gontowski *FJG*

September 10, 1991

MODIFICATION REQUEST No. 2
Piezometer Grouting
SCP Carlstadt Superfund Project

As per the Progress Meeting held this morning at the SCP Carlstadt site, Canonie's Construction Superintendent, Cliff Cordova, walked the site with you to determine which piezometers will probably be damaged by the slurry wall construction and therefore require grouting. The outcome of this site walk was the determination that the following piezometers will require grouting:

- o Piezometer P-1;
- o Piezometer P-7;
- o Piezometer P-12;
- o Piezometer P-13.

Additionally, as agreed to during later discussions among Pat Evangelista of the USEPA and field representatives from Canonie, Langan and USEPA, these piezometers will be removed if they are exposed and/or disturbed during slurry wall trenching.

The other piezometers at the site are not expected to be effected by slurry wall construction activities and will not be grouted. Also, as discussed at the Progress Meeting, a drilling crew will be at the site on the morning of Wednesday September 11, 1991 to perform the grouting work.

If you have any questions, please contact me.

FJG/fq

cc: Don Murphy - Langan
Gerry Coscia - Langan
Pam Lange - NJDEPE
Pat Evangelista - USEPA
Jerry Marasca - USEPA
Cliff Cordova - Canonie
Curt DeWolf - Canonie
Joe Mihm - Canonie
Jim Semple - Canonie

100514

CanonieEnvironmental

Canonie Environmental

January 20, 1992

Canonie Environmental Services Corp.
500 North Guilford Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551

Fax: 215-337-0560

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

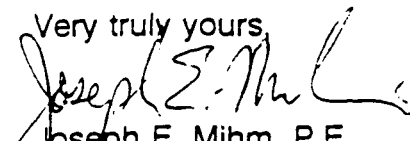
Modification Number 2, Revision 1
Grouting Piezometers
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) was unable to save Piezometer P-9 from damage during construction activities as proposed in our original letter for Modification Number 2 dated September 10, 1991. Canonie requests approval to grout this piezometer as originally proposed in the Remedial Design Report. The approved procedures as outlined in Technical Specification Section 02110 will be followed.

If you have any questions, please contact me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/mh

100515

Canonie Environmental Services, Inc.
100 North Guilford Road, Third Floor
P.O. Box 1000, Pottsville, Pennsylvania 17456
Phone: 215 337 2551
Fax: 215 337 0560

September 10, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST No. 3
Decontamination Pad Enlargement
SCP Carlstadt Superfund Site

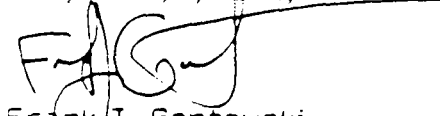
Dear Dr. Murphy:

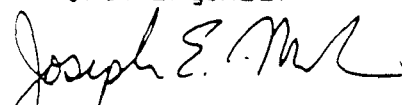
Based on field review by our Construction Superintendent, Canonie Environmental Services Corp. (Canonie) is requesting authorization to increase the 10-foot by 30-foot decontamination pad shown on the project drawings to dimensions of approximately 20-foot by 40-foot. The increased size will provide field personnel with increased work area during decontamination operations.

Your field representative, Mark Seel, has notified Canonie that verbal authorization for the decontamination pad enlargement has been provided by Mr. Pat Evangelista of the EPA. Therefore, Canonie will proceed with construction of the decontamination pad in anticipation of the receipt of written approval.

If you should have any questions, please contact me.

Very truly yours,


Frank J. Gontowski
Project Engineer


Joseph E. Mihm, P.E.
Project Manager

JEM/dk

Canonie Environmental Services, Inc.
500 North Gulph Road - 1st Floor
King of Prussia, Pennsylvania 19381
Phone 215 337 2551
Fax 215 337 0560

September 24, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST NO. 4
Temporary Facilities Modifications
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie herein requests the following modifications to the temporary facilities at the site. The modifications to the temporary facilities are being proposed to improve the constructability and to accommodate actual equipment/materials which are being utilized at the site. Itemized below is a list of proposed modifications to the temporary facilities. The attached sketch shows the modifications in bold print.

1. Second Gate Access to Staging Area - Approval to shift the second gate in the (temporary) staging area to another existing gate location is requested.

REASON: The proposed modification to the second gate will facilitate better flow of traffic in the staging area, will provide a better turning radius, and will eliminate any disturbances to an existing power pole at the original gate location shown on the drawings. A gate and curb cut already exists at this proposed location and these will be improved in accordance with the approved plans.

2. Layout of Staging Area - Approval to shift the (temporary) staging area approximately 20-feet to the south is requested.

REASON: Shifting the staging area to the south will provide direct access to the second gate as mentioned above. This modification will also provide additional space for handling trench spoils during slurry wall construction and increase accessibility to the slurry wall for construction equipment working in the main gate area. No change to the staging area other than shifting its location is requested.

Dr. Murphy

2

September 24, 1991

3. Orientation of the Decontamination Pad - Approval to orient the decontamination pad at an angle of 90-degrees to the staging area access road instead of the planned 45-degrees is requested.

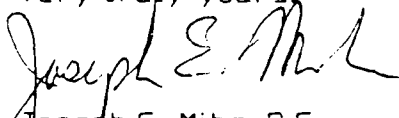
REASON: The 45-degree orientation of the decontamination pad may be misused as a convenient turn-around for backfill delivery trucks or other vehicles. Reorienting the decontamination pad another 45-degrees would prohibit the use of the decontamination pad in any turning activities. Furthermore, the 90-degree orientation will serve to provide additional protection to Well Cluster 2 from vehicles exiting the decontamination pad.

4. Slurry Hydration Pond Location - Approval to relocate the slurry hydration pad from a central location on the site to an area adjacent to the staging area is requested.

REASON: Bentonite is being delivered to the site in "super sacks" and pneumatic transport trucks. Relocating the slurry hydration pond will reduce the pumping distance to hydrate the bentonite, avoid moving trucks into the exclusion zone and eliminate the need to decontaminate pumping equipment. The slurry mixing operation will therefore proceed more efficiently.

If there are any questions, please contact me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/bk

Attachments

cc: Mark Seel - LESI

Michael (Cliff) Cordova - Canonie

Curt DeWolf - Canonie

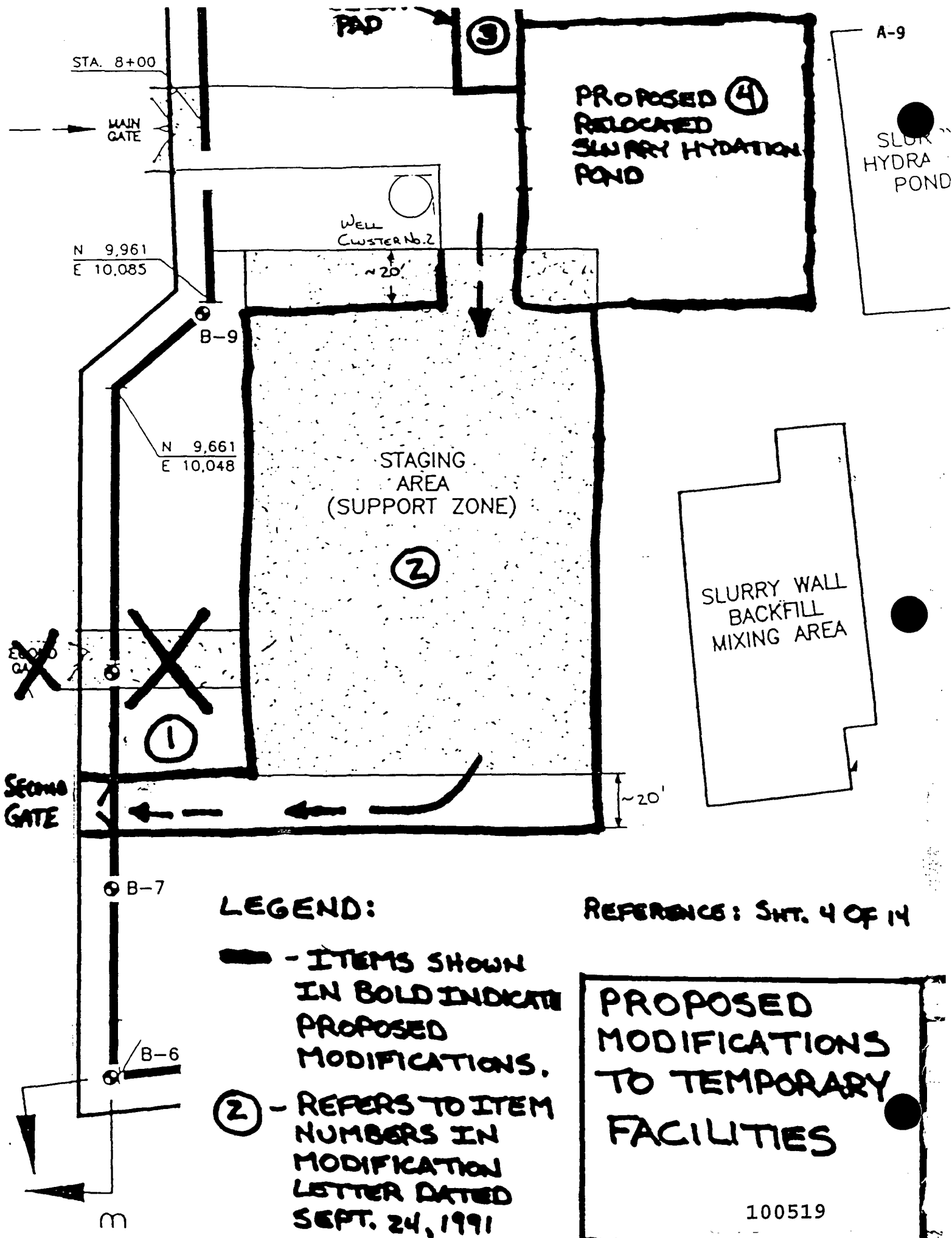
Frank Gontowski - Canonie

Peter F. Porter - Canonie

James Semple - Canonie

100518

CanonieEnvironmental



October 8, 1991

Canonie Environmental Services Corp.
500 North Guilph Road - Third Floor
King of Prussia, Pennsylvania 19406
Phone 215 337 2551
Fax 215 337-0560

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST No. 5
Slurry Wall Backfill Mixing Procedure Modifications
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) herein requests authorization to utilize a slurry wall backfill mixing procedure modified slightly from the method outlined in the Interim Remedy Remedial Design Report (IRRDR), which calls for:

1. Mixing the imported backfill soil with approximately three percent dry bentonite;
2. Adding bentonite slurry to the imported backfill/dry bentonite material and mixing to obtain a homogeneous paste with a slump of between three and six inches.

The modified slurry wall backfill mixing procedure will call for:

1. Mixing the imported backfill soil with bentonite slurry;
2. Adding three percent dry bentonite to the backfill/slurry material and mixing to obtain a homogeneous paste with a slump of between three and six inches.

Utilizing the modified procedure will provide Canonie with a more efficient mixing operation considering the equipment which is presently on-site. Should any changes be made to our equipment inventory during the project, Canonie requests that our construction superintendent be given the latitude to use either of the mixing methods described. The final backfill mix will meet the specification requirements regardless of which mixing method is used.

Dr. Donald J. Murphy

2

October 8, 1991

Canonie is requesting a response from Langan Environmental Services, Inc. (LESI) as early as possible on Tuesday October 8, 1991 so these activities can commence.

If you have any questions, please contact me.

Very truly yours,

Joseph E. Mihm / FJC
Joseph E. Mihm, P.E.
Project Manager

JEM/bk

cc: Mark Seel - LESI
Curt DeWolf - Canonie
Frank Gontowski - Canonie
Peter F. Porter - Canonie
James Semple - Canonie

100521

CanonieEnvironmental

Canonie Environmental

October 9, 1991

Canonie Environmental Services, Inc.
300 North Union Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone 215-337-2551

Fax 215-337-0560

90-198-01

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST No. 6
Slurry Wall Corner Modification
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

The slurry wall excavation began on Monday, October 7, 1991 and has proceeded from Station 1+50 to approximately Station 3+00. Based on our observations of the subsurface conditions encountered to date, Canonie Environmental Services Corp.'s (Canonie's) field staff, including Mr. Van Bares (slurry wall construction consultant), anticipates that the flowing action of the soil/bentonite backfill mixture could potentially cause erosion of the soils at the location of the 90 degree corners (shown at borings B-6, B-14, and B-1 on Sheet 4 of the Construction Drawings), which in turn could cause sloughing or a collapse of the side walls. If this condition were to occur, it would be unacceptable from a slurry wall quality control standpoint (i.e., maintaining the proper trench key depth and maintaining the proper uncontaminated backfill mixture) and for safety of personnel and equipment working in the vicinity of the trench.

This potential problem can be avoided by constructing the corners at borings B-6, B-14, and B-1 using 45 degree or rounded corners in the same manner as the corner at boring B-11. The use of 45 degree or rounded corners for turns in the slurry wall would be consistent with the overall design of the slurry wall and improve the flow of the backfill.

Canonie herein requests approval to use the same 45 degree (or rounded) corners shown at boring B-11 for the corner at borings B-6, B-14, and B-1.

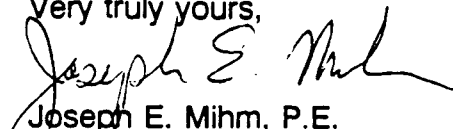
Donald J. Murphy, Ph.D., P.E.

2

October 9, 1991

If you have any questions on this matter, please call me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/pg

cc: Gregg Hatt, HiTech Remediation, Ltd.
Mark Seal, Langan Environmental Services, Inc.
Van Bares, Canonie
Curt DeWolf, Canonie
Frank Gontowski, Canonie
Peter Porter, Canonie
James Semple, Canonie

100523

CanonieEnvironmental

Canonie Environmental Services, Inc.
500 North Gulph Road Third Floor
King of Prussia, Pennsylvania 19151
Phone 215-337-2551
Fax 215-337-0560

October 15, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST No. 7
Personnel Decontamination Area Modifications
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

In accordance with the request of Mr. Pat Evangelista of the USEPA at the SCP Carlstadt weekly progress meeting on October 15, 1991, Canonie herein requests approval to move the personnel decontamination area from its present location at the northwest corner of the site to an area in the vicinity of the main gate. This relocation work will be required in order to provide workers with a decontamination area once the slurry wall operation moves north of the main gate entrance road. The personnel decontamination area may be re-established in the present location once Canonie's air monitoring indicates this action is satisfactory.

It is anticipated that the relocated personnel decontamination area will be required starting Wednesday October 16, 1991.

If you have any further question, please contact either myself at (215) 337-2551 or Mr. Curt DeWolf at (201) 438-0096.

Very truly yours,

Joseph E. Mihm / FJC
Joseph E. Mihm, P.E.
Project Manager

Canonie Environmental

A-15

Canonie Environmental Services Corp.
500 North Gulph Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551
Fax: 215-337-0560

October 26, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST # 8
Utilization of Existing Office Building
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests permission to utilize the existing office building as an extension to the personnel decontamination area once it is relocated from its present temporary location next to the north side of the main gate. The relocation will take place once slurry wall excavation has progressed east along Gotham Parkway far enough so that potential air emissions will not impact the use of the building.

Utilization of the office building is being requested so that a protected and heated area will be available during the ensuing cold weather for worker shelter and storage of sensitive equipment. The attached sketch indicates the manner in which the existing office building will be incorporated for personnel decontamination purposes.

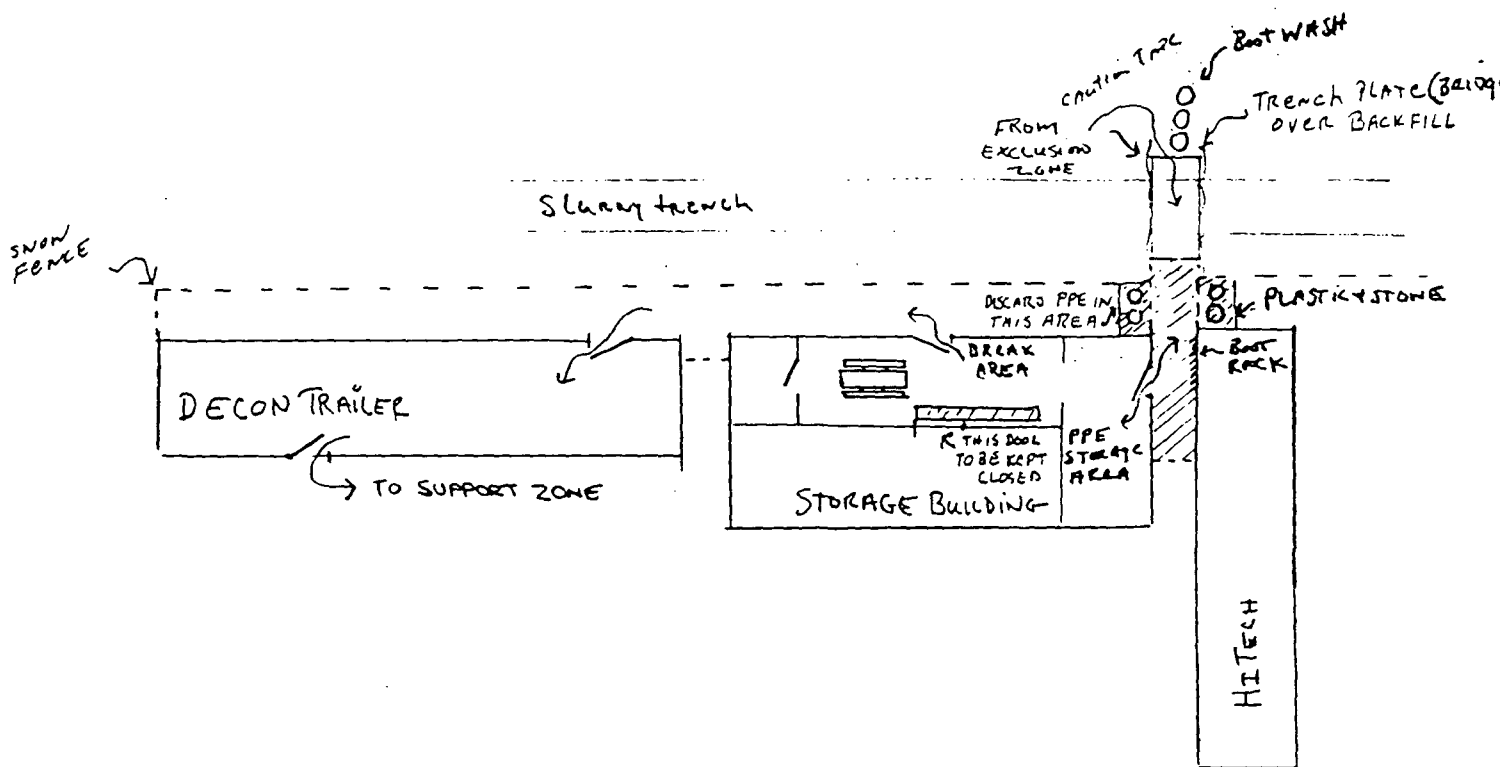
If you have any questions, please contact either myself at (215) 337-2551, or Mr. Curt DeWolf at the project site at (201) 438-0096.

Very truly yours,

Joseph E. Mihm - C.W.D.

Joseph E. Mihm, P.E.
Project Manager

100525



November 11, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

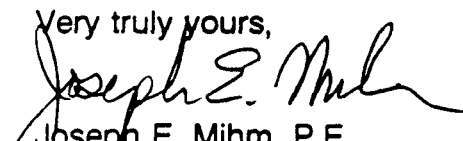
Modification Number 9
Gundwall Top-of-Sheet Modification
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) is requesting a modification to the slurry wall installation procedure as indicated on Sheet 7 of 14 of the Construction Drawings. This modification involves the detail shown on Step 3 of Sheet 7. The modification requested herein is to allow the Gundwall sheets to extend all the way to the ground surface instead of cutting the sheets six inches below the ground surface. This modification will allow installation of the Gundwall system in the slurry wall in its current condition of being backfilled to the ground surface. This modification is consistent with the design objectives and will in no way reduce the functionality of the Gundwall system.

If you have any questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/pg

Canonie Environmental Services Corp.
500 North Gulph Road, Suite 315
King of Prussia, Pennsylvania 19406
Phone 215-337-2551

November 12, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive, Center 2
Elmwood Park, NJ 07407

Modification Number 10
Electric Well Pumps
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests your approval to substitute the use of electrical-submersible pumps for the air-operated pumps in the dewatering system at the Scientific Chemical Processing (SCP) Site. Electrical-submersible pumps will provide an equivalent means for dewatering the site and offer the following additional advantages:

1. The selected submersible pumps (Grundfos Model 5E5) are reliable, low maintenance, low flow pumps.
2. The selected submersible pump (Grundfos 5E5) is suitable for hazardous material applications and conditions which are expected at the SCP Site. The level controls are intrinsically safe for use in National Electric Code Class 1, Division 1 environments.
3. The selected pumps are constructed of stainless steel and Teflon™ materials which will provide corrosion and chemical resistance for the conditions expected.

Dr. Donald J. Murphy, P.E.

2

November 12, 1991

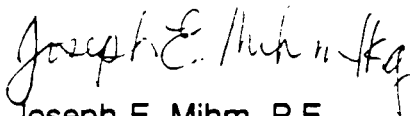
4. Long-term operation and maintenance requirements and costs should be reduced because of the elimination of a compressor and the need for a compressor shed. Use of electrical power is readily available at the site and provides more flexibility for any potential system modifications.

The revisions to the Interim Remedy Remedial Design Report (IRRDR) for the use of electrical submersible pumps in place of pneumatic pumps are attached for your approval. These revisions have been underlined in the text to indicate where changes have been made and include the following:

1. Section 15100 of the Technical Specifications;
2. Revisions to Sheets 9 through 14 of the Construction Drawings;
3. Revision to the Table of Contents and Pages 1, 2, 3, 4, 7, and 11 of the Operations and Maintenance Plan;
4. Revisions to Pages 5 and 6 of the Construction Operations Plan.

If you have any questions regarding this matter, please call me.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/bam

Attachments

Canonie Environmental

November 13, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 11
Relocated Decontamination Pad
SCP Carlstadt Superfund Site

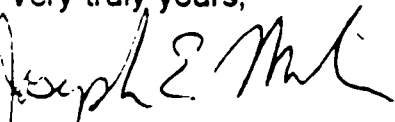
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) hereby requests approval to construct and utilize a relocated decontamination pad if deemed necessary.

The relocated decontamination pad may be constructed at Canonie's option if utilization of the present decontamination pad becomes impractical due to the sequencing of events during final site grading and removal of the staging area. The relocated decontamination pad, if constructed, will be positioned in the vicinity of the south staging area entrance gate and will possess the same approximate dimensions as the present decontamination pad. The crushed stone from the present decontamination pad may be reused for the relocated decontamination pad. The relocated decontamination pad would remain in-place until no longer needed.

If you have any further questions, please contact me at (215) 337-2551 or Mr. Curtis DeWolf at (201) 438-0096.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/rm

Canonie Environmental

November 21, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 12
Well and Piezometer Raising/Repair
SCP Carlstadt Superfund Site

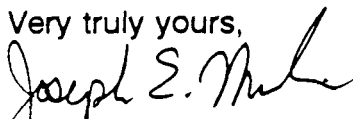
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests your approval to raise/repair the existing wells and piezometers as outlined in Table 1. The actions to be taken were formulated based on known well/piezometer conditions and the planned grading activities. Please note that the actions to be taken as given in Table 1 may require slight adjustments to accommodate the actual final grades. The attached sketch shows additional detail of how the well head extensions will be completed.

Based on our observations of the field conditions, these modifications to the wells/piezometers will not affect the integrity of any well seals or well gravel packs. Therefore, a licensed well driller will not be required for this work. The final report will include records indicating the actual materials used and repairs performed on each well/piezometer.

If you have any questions, please contact me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

Attachment

TABLE OF PROPOSED WELL /PIEZOMETER MODIFICATIONS
SCP CARLSTADT SUPERFUND SITE

<u>Well/Piezometer</u>	<u>Raise/Repair</u>	<u>Action to be Taken</u>
MW-2S	Raise	Raise approx. 2' w/ 6" diameter black iron welded outer casing & 4" diameter type 316 stainless steel threaded inner casing (See Note 1).
MW-2D	Raise	Raise approx. 2' w/ 6" diameter black iron welded outer casing & 4" diameter type 304 stainless steel welded inner casing (See Note 1).
MW-3S	Raise	Raise approx. 4' w/ 6" diameter black iron welded outer casing & 4" diameter type 316 stainless steel welded inner casing (See Note 1).
MW-4S	Raise	Raise approx. 4' w/ 6" diameter black iron welded outer casing & 4" diameter type 316 stainless steel threaded inner casing (See Note 1).
MW-6S	Repair	4" diameter stainless steel inner casing broken approximately 1' below ground surface; broken section will be re-welded (See Note 1).
MW-7S	Raise	Raise approx. 2' w/ 6" diameter black iron welded outer casing & 4" diameter type 316 stainless steel threaded inner casing (See Note 1).

TABLE OF PROPOSED WELL/PIEZOMETER MODIFICATIONS
 SCP CARLSTADT SUPERFUND SITE
 (Continued)

<u>Well/Piezometer</u>	<u>Raise/Repair</u>	<u>Action to be taken</u>
MW-7D	Raise	Raise approx. 2' w/ 8" diameter black iron welded outer casing & 4" diameter type 304 stainless steel welded inner casing (See Note 1).
P-2	Raise	Raise approx. 3' w/ 4" diameter black iron welded outer casing and cap, & 2" diameter PVC threaded inner casing.
P-3	Raise	Raise approx. 3' w/ 4" diameter black iron welded outer casing w/ cap and cap, & 2" diameter PVC threaded inner casing.
P-4	Raise	Raise approx. 2' w/ 4" diameter black iron welded outer casing w/ cap and cap, & 2" diameter PVC threaded inner casing.
P-6	Raise	Raise approx. 2' w/ 6" diameter black iron welded outer casing w/ cap and cap, & 2" diameter PVC threaded inner casing; concrete-filled stabilizer pipe will be buried.
P-9	Repair	Inner 2" diameter PVC casing is pinched approx. 1' below ground surface; required repairs can not be determined until excavation is performed around piezometer (See Note 2).

TABLE OF PROPOSED WELL/PIEZOMETER MODIFICATIONS
SCP CARLSTADT SUPERFUND SITE
(Continued)

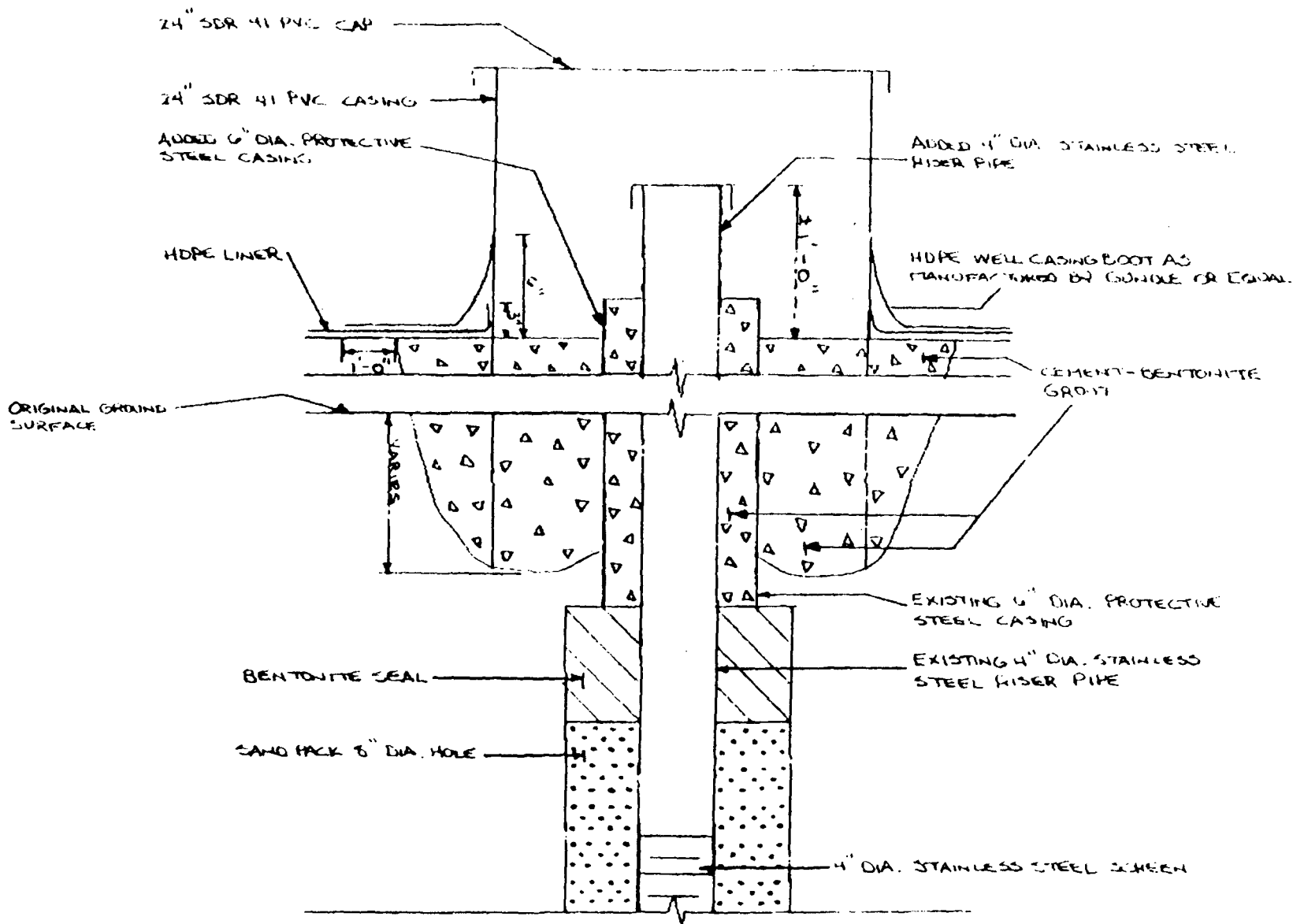
<u>Well/Piezometer</u>	<u>Raise/Repair</u>	<u>Action to be taken</u>
P-9	Repair	Inner 2" diameter PVC casing is broken at ground surface; required repairs can not be determined until excavation is performed around piezometer (See Note 2).
Pipe 1	-	Cut flush with ground surface and cap per 9/10/91 Progress Meeting Minutes.
Pipe 2	-	Cut flush with ground surface and cap per 9/10/91 Progress Meeting Minutes.
Pipe 5	-	Cut flush with ground surface and cap per 9/10/91 Progress Meeting Minutes.
Pipe 7	-	Cut flush with ground surface and cap per 9/10/91 Progress Meeting Minutes.

NOTES:

1. Reference the attached Extraction Well Final Well Raising Detail for installation procedures.
2. Repairs proposed at this time include cutting PVC pipe below pinched area and adding 2" diameter threaded or coupled PVC casing; final repair requirements will be determined in the field following excavation around piezometer.
3. Pipes 3, 4, 6 and 8 have not been located in the field; see sheet 2 of the Construction drawings for the locations of Pipes 1, 2, 5 and 7.

By ELG Date 11/1/91 Subject SCP CAR-1342 Sheet No. 1 of 1
 Chkd. By _____ Date _____ Proj. No. 30-133

1/4" X 1/4"



EXTRACTION WELL FINAL WELL RAISING DETAIL
FOR WELLS REQUIRING RAISING FOR FINAL GRADING

NOTES:

1. WHERE APPLICABLE, THIS DETAIL WILL SUPERCEDE THE TWO EXTRACTION WELL FINAL MODIFICATION DETAILS ON SHEET 10 OF THE CONSTRUCTION DRAWINGS.
2. APPROPRIATE WELL HEAD MODIFICATIONS WILL BE INCORPORATED FOLLOWING WELL RAISING FOR THE CONSTRUCTION DRAWINGS.

November 21, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood, NJ 07407

Modification Number 13
Hydrotite Interlock Material
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

In accordance with Section 02215-3.5E of the Technical Specifications, Canonie Environmental Services Corp. (Canonie) requests approval to use an alternative interlock seal material in the slurry wall flexible membrane liner (FML). An alternative interlock seal material is required for the following reasons:

1. The interlock seal expansion test results for the Hydrotite "K" Type interlock seal indicate that the material did not expand to two times or more the original diameter.
2. Our slurry wall FML contractor, Gundle Lining Construction Corp. (Gundle), has become aware of a potential problem with the use of high swelling interlock seal materials. The specified interlock seal material, Hydrotite "K" Type, which can swell to twice the original diameter, may exert excess pressures during swelling which in turn may cause the interlocks to lose structural integrity or burst. A material with less than a twofold swelling capacity has been recommended by Gundle.
3. Utilization of the Hydrotite "K" Type has been discontinued by Gundle because of the problem described above.

Gundle has proposed to utilize Hydrotite "T" Type interlock seal material. The Hydrotite "T" Type interlock seal material is made from chloroprene rubber (the same material as the Hydrotite "K" Type). The Hydrotite "T" Type has a dry diameter of

Donald J. Murphy, Ph.D., P.E.

2

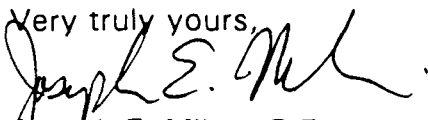
November 21, 1991

approximately 6 millimeters (mm) with expansion properties of 1.2 to 1.5 times its volume when immersed in slurry for 72 hours. A sample of the Gundwall locking section is enclosed for your visual inspection.

Attached are test results indicating the appropriateness of the Hydrotite "T" Type as an interlock seal. Hydrotite "T" Type sample utilized for this test possessed a dry diameter of approximately 6 mm and is labeled as RSST-060P on the attached test results sheet. This sample swelled to approximately 7.67 mm in 48 hours, which more than adequately seals the annulus within the interlock. It should be noted for clarity that the dry diameter of the sample indicated on the calculation brief is 6.75 mm. The manufactured dry diameter of this sample was approximately 6 mm, however, the humidity at Gundle's facility in Houston, Texas caused swelling to 6.75 mm prior to testing. Therefore, this sample actually swelled from approximately 6 mm to 7.67 mm.

If you have any further questions, please contact me at (215) 337-2551.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/pg

Attachment

Canonie Environmental

100537

November 27, 1991

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive, Center 2
Elmwood Park, NJ 07407

Modification Number 14
Proposed Adjustments to Final Grading
SCP Carlstadt Superfund Site

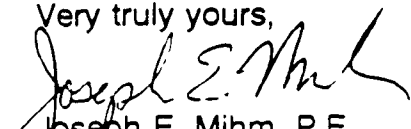
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) submits the enclosed drawing of the proposed final grading for review and acceptance. The proposed final grades indicate the final contouring plan for the site. These proposed final grade elevations may vary depending on the actual volume of slurry wall and demolition spoil materials available for consolidation on-site. The actual final grades will be documented on the as-built drawings.

The proposed final grading plan shown on the attached drawing provides for a mounded area in the vicinity of the slurry pond, leaving the mound of slurry wall spoils on the Gotham Parkway side of the site and leaving the existing "dirt pile" in the vicinity of monitoring well MW-7S. These adjustments to the final grading plan are consistent with the design basis of the approved interim remedy.

If you have any questions, please call me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/bam

Attachment

November 27, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 15
Cold Weather Seaming of Infiltration Barrier
SCP Carlstadt Superfund Site

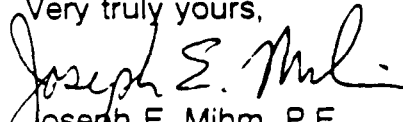
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to perform field seaming outside the temperature range specified in Section 02210-3.4D of the Technical Specifications (i.e., at temperatures below 40 degrees Fahrenheit). Section 2.3.2.1 of the Quality Assurance Project Plan (QAPP) provides an allowance to perform seaming outside the ambient condition limits if the geomembrane installer demonstrates that he is able to perform seaming in cold weather.

The installer, National Seal Company (NSC), has performed numerous projects in cold regions and is recognized as an industry leader in this area. Attached is a technical paper prepared by NSC illustrating their experience with two projects involving both extension and double hot wedge seaming techniques on cold weather projects. NSC is currently working on a cold weather project at the Carlton Landfill in Carp, Ontario.

If you have any further questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

Attachment

NATIONAL SEAL COMPANY

COLD WEATHER SEAMING
CAPABILITY

SPRAGUE, B.T.¹, National Seal Company, Denver, CO and
BOSCHUK, J., Jr., Fred C. Hart Associates, Inc., Pittsburgh.

INSTALLATION OF HDPE LINERS DURING WINTER MONTHS

HDPE geomembrane liners were installed in two landfills during winter months under humid, winter climatic conditions. The landfill designs consisted of a double membrane liner system with a leak detection system between the primary and secondary membrane liners. The authors present specific quality control data from the two sites, and relate the data to ambient conditions at the time of welding of HDPE.

¹Current address is HDR Infrastructure, Inc., Denver, CO.

1984 Amendments to the Resource Conservation and Recovery Act (RCRA) require all hazardous waste landfills to comply with *minimum technology standards* for any portion permitted or constructed after May 1985 (1,2). With these minimum technology standards, Congress mandated installation of two geomembrane liners with leak detection between the geomembranes for all hazardous waste landfills constructed

Canonie Environmental

A-32

December 10, 1991

Canonie Environmental Services Corp.
500 North Union Road, P.O. Box 100
Pottsville, Pennsylvania 17854
Phone: (717) 337-2551
Fax: (717) 337-1560

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 16
FML Bottom Anchor Modification
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to modify the flexible membrane liner (FML) bottom anchor detail given on Sheet 7 of 14 of the Construction Drawings. Canonie's subcontractor, Gundle Lining Construction Corp. (Gundle), desires to modify the anchor utilizing either a Type 1 or Type 2 "looped" FML bottom anchor as shown on the attached sketches. The "looped" anchor will provide a composite thickness of approximately 120 mil (approximately 1/8-inch) in place of the 1/4-inch thickness called for on the anchor detail. However, the "looped" anchor will have the added advantage of being more flexible due to the thinner section, therefore allowing it to fit the tip of the insertion plate more securely. Because the adherence of the Gundwall sheet to the insertion plate is the controlling factor in successfully driving the Gundwall sheets, the "looped" anchor is a more desirable installation method.

Gundle has successfully utilized the "looped" anchor on other installations including a recently completed interlocking vertical FML installation performed in the United States. This project was performed at a Shell Oil facility in Hammond, Indiana where the sheets were driven through sandy soils. Because the slurry wall backfill material will be considerably softer than this sandy material, the installer is sure that the "looped" anchor will perform satisfactorily for this project.

100542

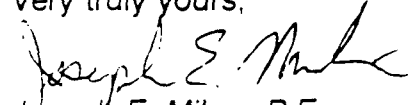
Donald J. Murphy, Ph.D., P.E.

2

December 10, 1991

If you have any questions, please contact me at (215) 337-2551.

Very truly yours,



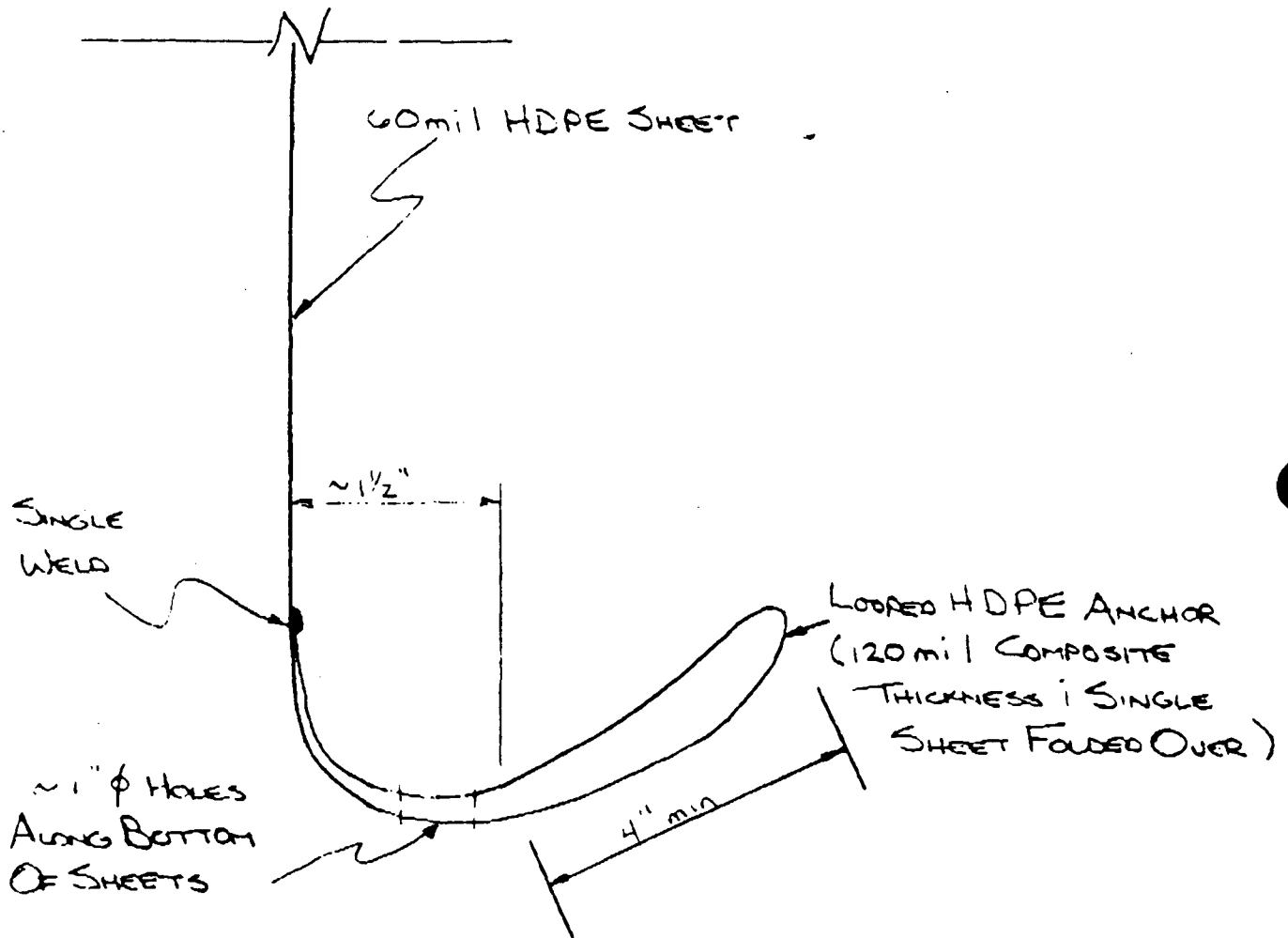
Joseph E. Mihm, P.E.
Project Manager

JEM/pg

Attachment

By EKS Date 12/9/91 Subject SCP CARLSTADT Sheet No. 1 of 2
 Chkd. By Date Proj. No. 30-198
 1/4" X 1/4"

"LOOPEO" FML BOTTOM ANCHOR DETAIL TYPE 1 - SINGLE WELD CONSTRUCTION

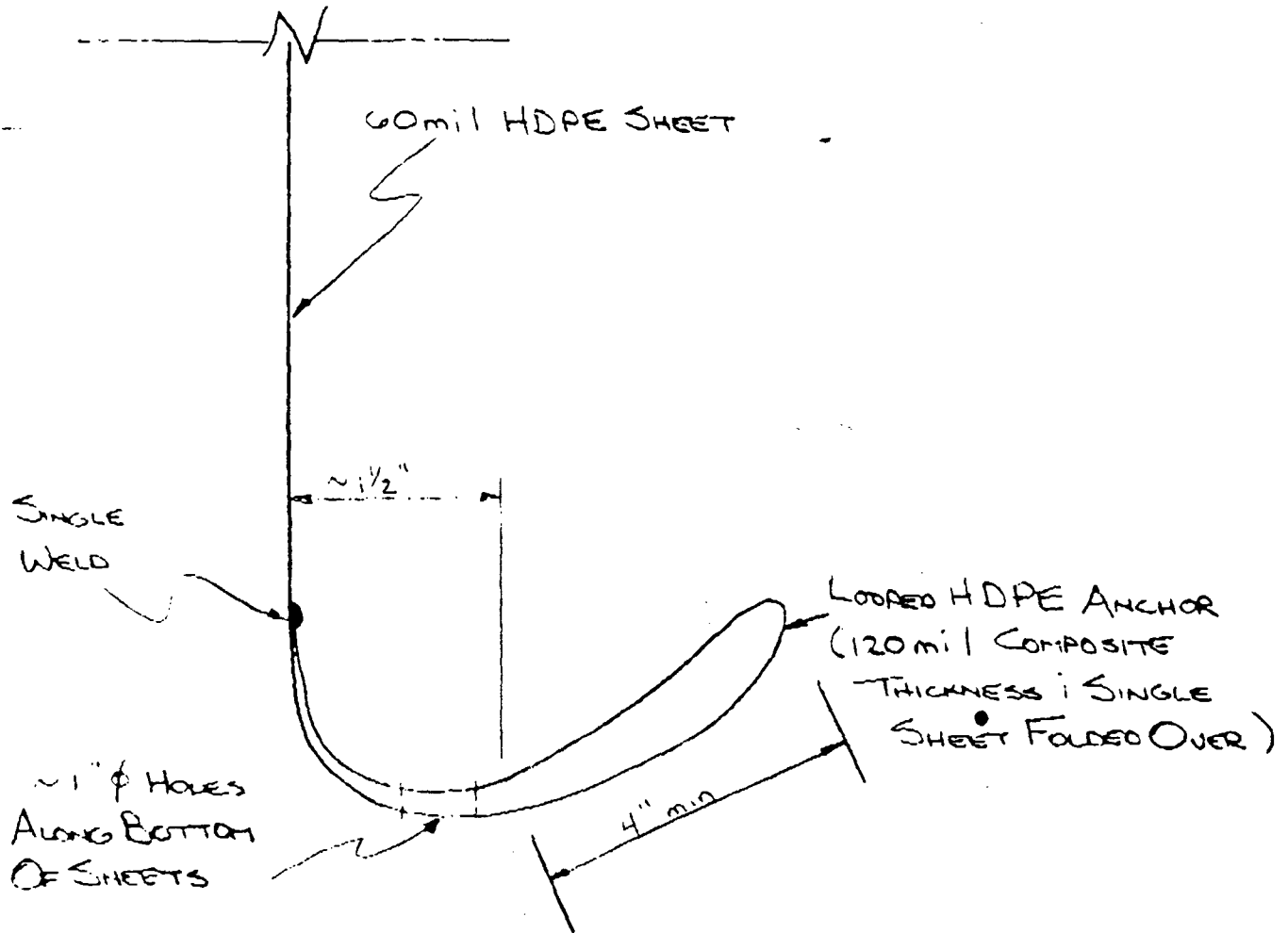


By EK Date 12/9/91 Subject SCP CARLSTADT Sheet No. 1 of 2

Chkd. By _____ Date _____ Proj. No. 90-198

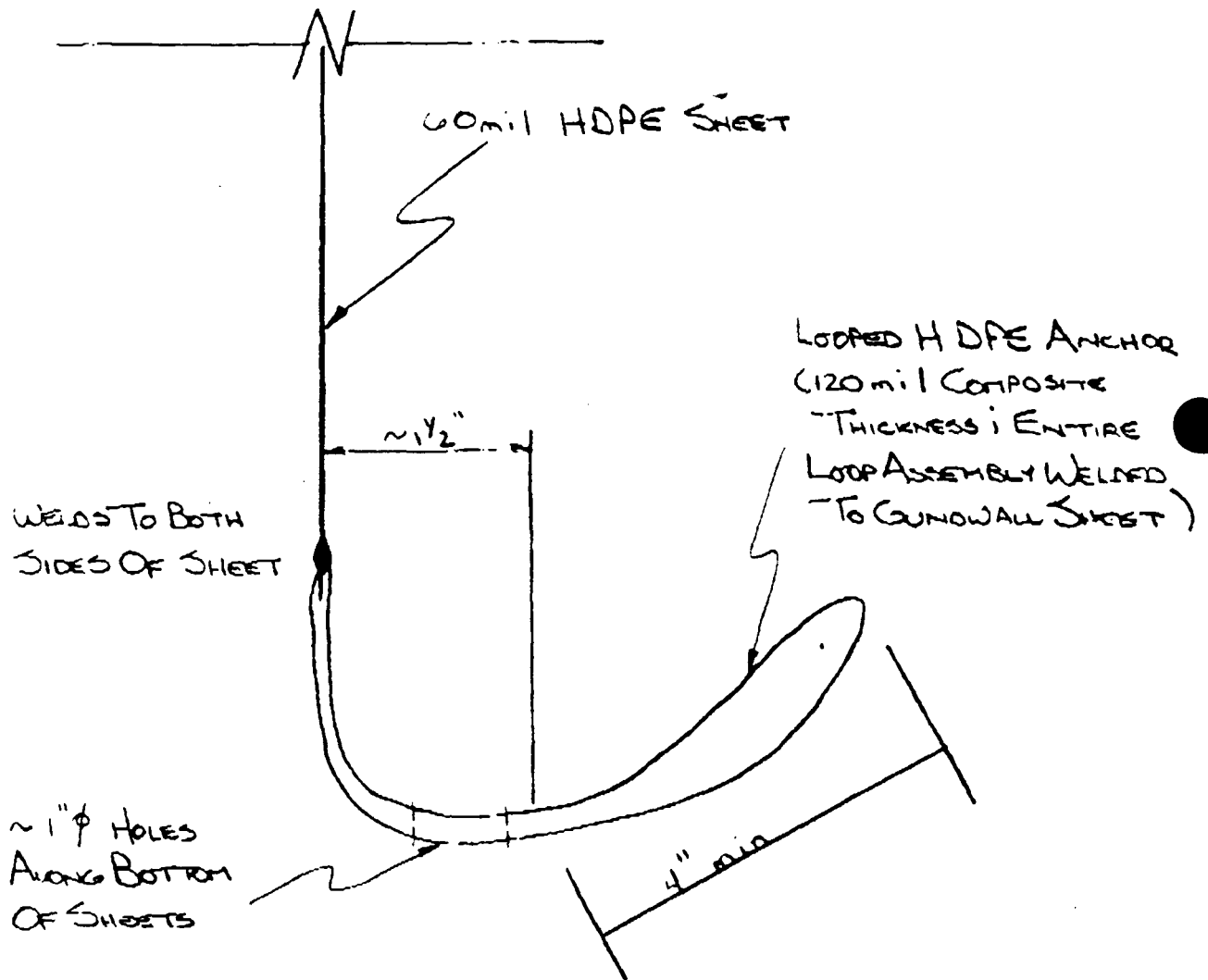
1/4" X 1/4"

"LOOPEO" FML BOTTOM ANCHOR DETAIL TYPE 1 - SINGLE WELD CONSTRUCTION



By EX2 Date 12/9/91 Subject SCP CARLSTADT Sheet No. 2 of 2
 Chkd. By Date Proj. No. 90-158
 1/4" X 1/4"

"Looped" FML Bottom Anchor Detail TYPE 2 - DOUBLE WELD CONSTRUCTION



Canonie Environmental

December 10, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 17
Fencing Material Modifications
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to substitute the following items in Section 02831 of the Technical Specifications (Barriers and Fencing)

1. Use Class 2 galvanized coated fence fabric, barbed wire, and pipe in place of aluminum coated items (Sections 02831-2.2A.1 through 2.2A.11);
2. Switch the positions of the tension wire and horizontal rail. A horizontal top rail will be used. It will have a nominal outside diameter of approximately 1-5/8 inches. The tension wire will be located along the bottom of the fence;
3. Replace Schedule 40 pipe with structural grade pipe with a wall thickness of approximately 1/4 inch.

The substitution of Class 2 galvanized fence fabric is being chosen for the following reasons:

1. The 0.4 ounce/square foot of aluminum-coated fence fabric presently specified is equivalent to a fence fabric with 1.2 ounce/square foot of galvanizing. We are proposing the utilization of a fence fabric with heavier galvanizing since it is an equivalent material and is more readily available (at an equal cost) from our fencing supplier.

Donald J. Murphy, Ph.D., P.E.

2

December 10, 1991

2. The manufacturer has recommended the use of galvanized fence fabric with galvanized pipe.
3. Galvanized fence fabric can be obtained with limited warranties which will exceed the anticipated duration of remedial activities at the site.

Attached is information supporting our claims from a manufacturer that produces both aluminum and galvanized fencing materials.

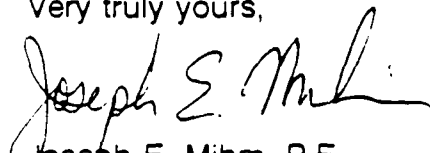
The use of the tension wire at the bottom of the fence and horizontal rails at the top of the fence is typical fence construction practice. The use of structural grade pipe will provide a greater average wall thickness than Schedule 40 pipe. Since both grades of pipe are manufactured from the same materials, the structural grade pipe will perform in a superior manner.

Additionally, Section 2.2A.3 of the Barrier and Fencing specifications states that pull posts have a nominal outer diameter (O.D.) of 4 inches. This is a typographical error and should be corrected to a nominal O.D. of 3 inches.

A copy of the revised Section 2.2A of Section 02831 of the Technical Specifications is attached and incorporates the modifications discussed above.

If you have any further questions, please contact me at (215) 337-2551.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/bam

Attachment

100548

CanonieEnvironmental

ATTACHMENT A

REVISED PORTION OF SECTION 02831
BARRIERS AND FENCING

PART 2 - PRODUCTS

2.2 Chainlink Fence and Gates

A. Fence materials shall conform to the following requirements:

1. Fence Fabric: 6-feet high, Number 9 gauge - 2-inch diamond-link mesh -woven from galvanized-coated steel (Class 2; coating weight 1.8 ounce per square foot) in accordance with American Society for Testing and Materials (ASTM) A392);
2. Line Posts: 2-inch galvanized structural steel pipe having a nominal O.D. of 2-1/2 inch;
3. Corner or Pull Posts: 2-1/2-inch galvanized structural steel pipe having a nominal outer diameter (O.D.) of 3.0 inch;
4. Main Gate Posts: 3-1/2-inch galvanized structural steel pipe having a nominal O.D. of 4.0 inch;
5. Personnel Entrance Gate Posts: 2-1/2-inch galvanized structural steel pipe having a nominal O.D. of 3.0 inch;
6. Top and Brace Rails: 1-1/4-inch galvanized structural steel pipe having a nominal O.D. of 1-5/8 inch;

7. Gate Frames: 1-1/2-inch galvanized structural steel pipe having a nominal O.D. of 1.9 inch - braced with pipe horizontally and vertically - welded throughout with adjustable truss rods on both diagonals;
8. Gate Fabric: To match fence fabric above;
9. Tension Wire: Number 7 gauge, galvanized coiled spring wire, located between 6 and 12 inches below top of fence fabric;
10. Galvanizing: All formed shapes, except tubing, shall be galvanized in accordance with ASTM A 123. Steel tubing (pipe section) shall be galvanized on inside and outside surfaces in accordance with ASTM A53. Zinc coatings shall average not less than 1.8 ounces per square foot;
11. Barbed Wire: Fence is to be equipped with 3 strands of barbed wire on top, attached by 45 degree angle mounting brackets pointed away from the enclosed areas. Each strand of barbed wire shall consist of two wires with four point barbs of similar wire spaced approximately five inches apart. Wire for strands and barbs shall be Number 12.5 (AWG) (0.099 inch) galvanized steel.



December 4, 1991

A-41

Mr. Steve Pierce
Canonie Environmental
216 Patterson Plank Road
Carlstadt, NJ 07072

Dear Mr. Pierce

Re. SCP Carlstadt Site- Perimeter Fencing

Southeastern Wire has manufactured chain link fence fabric and fence accessories for over 40 years. Among the products we manufacture is GALAXY galvanized (zinc coated) chain link fence fabric, available in two specification classes, GALAXY 1200 and GALAXY 2000, corresponding to ASTM specification A 392, Class 1 (coating weight 1.2 oz/ft²) and Class 2 (coating weight 2.0 oz/ft²), respectively.

Galvanized (zinc) coatings have a proven history of providing corrosion protection to steel, under both atmospheric and immersion conditions. Galvanized coatings are highly resistant to corrosion from various organic materials, pesticides, and other potential corrosives, even under the extreme conditions of full immersion in concentrated solutions. Additionally, the film of basic zinc carbonate which initially forms on exposure to the atmosphere provides further resistance to corrosion from airborne contaminants.

For the referenced project we recommend 9 gage GALAXY2000 (ASTM A 392, Class 2) fabric. Southeastern Wire provides a 25 year limited warranty for this product, far in excess of the expected project life of 5-10 years. A 2 oz/ft² galvanized coating and a 0.4 oz/ft² aluminized coating are considered equivalent in most major specifications, for 9 gage fabric. In fact, Federal specification RR-F-191K/1D, Fencing, Wire and Post Metal (Chain Link Fabric, detail specification) provides for a 0.4 oz/ft² aluminized coating and, unless otherwise specified, a 1.2 oz/ft² galvanized coating. The American Association of State Highway Transportation Officials (AASHTO) specification M-181, Chain Link Fencing, a document referenced by all state departments of transportation, provides for a 0.4 oz/ft² aluminized coating and either a 1.2 or 2.0 oz/ft² galvanized coating. The option we are suggesting is for a galvanized coating heavier than the standard zinc coating provided for in the Federal specification and equal to the heaviest option in the AASHTO specification. Copies of the appropriate section of each specification is attached. Full copies of each of these specifications can be provided on request.

It is worth noting that aluminized chain link fence fabric is typically installed on galvanized framework, a practice that is recommended by manufacturers of aluminized fabric. It would seem illogical to allow galvanized framework and not allow galvanized chain link fabric.

If you require additional information, please call (800-669-9473).

Sincerely,



Jerry Gambrell
Technical Director

enc.

YOUR PARTNER IN PROGRESS

100551

Canonie Environmental

December 20, 1991

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 18
Deflected Sheet Pile Restoration
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to modify our October 31, 1991 sheet pile wall stability proposal as follows:

1. Leave the two sections of sheet pile wall (Sheets 155 to 170 and Sheets 181 to 191) in their current deflected position. Canonie has already placed the proposed riprap material along the creek side.
2. Install H piles along the creek side of the deflected sheet pile sections to provide additional support. Calculations showing that there is sufficient stability with this configuration are attached.

This modification is proposed because large debris was encountered during slurry wall excavation in the areas of the deflected sheet piling. This situation caused the slurry wall to be constructed much wider and closer to the sheet pile wall than originally proposed. If we try to remove the backfill so that the sheet piles could be pulled back, the section of soil between the sheet piles and slurry wall may be breached causing a loss of the slurry wall backfill. Restoration of the deflected sheet pile sections as proposed herein will provide a stable sheet pile wall while allowing the integrity of the slurry wall to be maintained.

Donald J. Murphy, Ph.D., P.E.

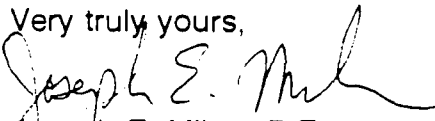
2

December 20, 1991

Canonie would like to begin construction of the H piles on December 26 or 27, 1991. This work will be performed in a careful manner so as to not disturb the sheet pile wall any further or affect the integrity of the slurry wall.

If you have any questions, please call me.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/pg

Attachment

CanonieEnvironmental

100553

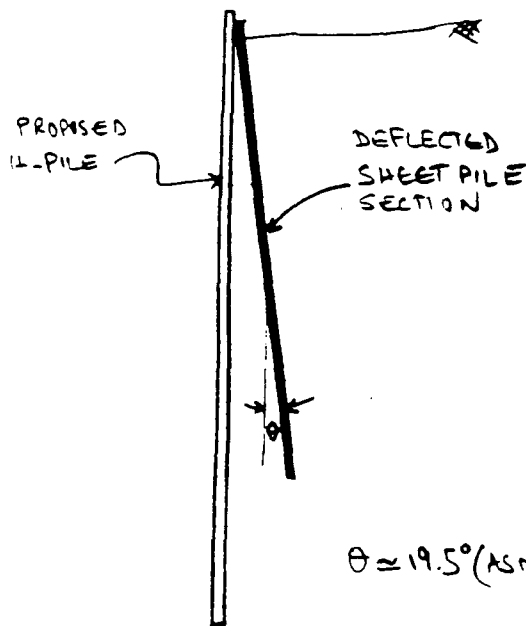
By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 1 of 10
 Chkd. By CC Date 12-19-91 SHEETPILE WALL SUPPORT Proj. No. 70-198
 1/4" X 1/4"

I. INTRODUCTION

RESTORATION OF THE DEFLECTED SECTIONS OF THE SHEETPILE WALL BY REMOVING BACKFILL AND PULLING THE SHEETS INTO VERTICAL POSITION IS NOT RECOMMENDED BECAUSE REMOVAL OF THE BACKFILL MAY CAUSE A BREACH IN THE BACKFILLED SLURRY WALL (SLURRY WALL IS MUCH WIDER BECAUSE OF LARGE SUBSURFACE DEBRIS REMOVAL).

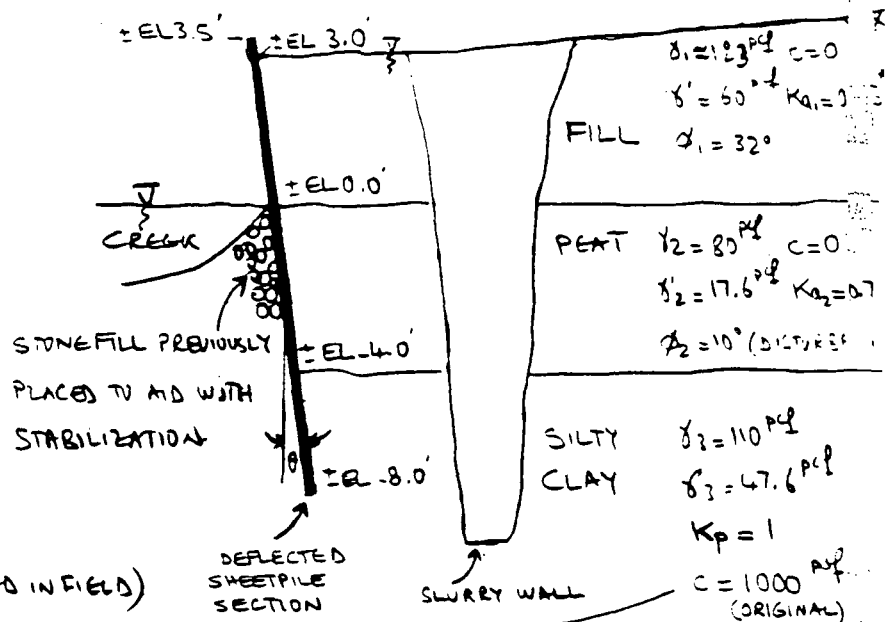
THE FOLLOWING BRACING METHOD WILL BE UTILIZED TO PROVIDE ADDITIONAL SUPPORT TO THE DEFLECTED SHEETPILE WALL SECTIONS FROM STA. 3+53 TO 3+90 (SHEETS 155 TO 170) AND STA. 4+15 TO 4+38 (SHEETS 181 TO 191). THESE CALCULATIONS SHOW THAT THIS BRACING METHOD WILL PROVIDE A SUFFICIENT FACTOR OF SAFETY FOR STABILITY OF THE SHEETPILE WALL.

CROSS-SECTION OF PROPOSED H-PILE



$$\theta = 19.5^\circ (\text{AS MEASURED IN FIELD})$$

CROSS-SECTION OF STRATIGRAPHY



$$\delta_1 = 12.3^\circ \quad c = 0$$

$$\delta' = 60^\circ \quad K_{a1} = 0.45$$

$$\text{FILL} \quad \phi_1 = 32^\circ$$

$$\text{PEAT} \quad \gamma_2 = 80 \text{ pcf} \quad c = 0$$

$$\delta'_2 = 17.6^\circ \quad K_{a2} = 0.7$$

$$\phi_2 = 10^\circ (\text{DISTURBED})$$

$$\text{SILTY CLAY} \quad \gamma_3 = 110 \text{ pcf}$$

$$\delta'_3 = 47.6^\circ \text{ pcf}$$

$$K_p = 1$$

$$c = 1000 \text{ pcf}$$

$$(\text{ORIGINAL})$$

USE $c = 500$ DUE TO DISTURBANCE AND BECAUSE H-PILE IS IN CLAY SOILS

* ACTIVE EARTH PRESSURE COEFFICIENT K_a FOR THE INCLINED FILL:

$$K_{a1} = \frac{\cos^2(\phi - \theta)}{\cos^2 \theta \cos(\theta + \delta) \left[1 + \frac{\sin(\phi + \delta) \sin(\phi - \theta)}{\cos(\theta + \delta) \cos(\theta - \delta)} \right]^2} = 0.45$$

WHERE $\phi = 32^\circ$, $\theta = 19.5^\circ$, $\beta = 0$, δ (WALL FRICTION) $= 17^\circ$

Canonie

By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 3 of 10

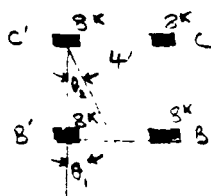
Chkd. By CC Date 12/19/91 SHEETPILE WALL SUPPORT Proj. No. 20-139

1/4" X 1/4"

II. FORCES AND PRESSURE DIAGRAM

THE ORIGINAL DESIGN PROVIDED FOR SURCHARGE LOADINGS OF THE SLURRY WALL CONSTRUCTION EQUIPMENT (CAT 225). HOWEVER, THE SLURRY WALL HAS BEEN CONSTRUCTED AND THESE LOADS ARE NO LONGER EXPECTED. FOR PURPOSES OF ANALYZING THE STABILITY OF THE DEFLECTED SHEETPILE SECTIONS AND SIZING THE H-PILE BRACING, THE ANALYSIS WILL PROVIDE FOR POSSIBLE LOADING OF A DRILL RIG.

THE WHEEL LOADS OF DRILL RIG IS 32^k FOR 2 REAR AXLES.



$$\theta_1 = \tan^{-1}(4/6) = 33^\circ$$

$$\theta_2 = \tan^{-1}(4/12) = 18^\circ$$

FROM USS STEEL SHEET PILING DESIGN MANUAL, P. 15:

$$\phi'_H = \phi_H \cos^2(1.1\theta)$$

∴ LATERAL PRESSURE ON A DUE TO LOAD B' :

$$\phi'_H = \phi_H \cos^2(1.1 \times 33) = 0.64 \phi_H \quad \& \quad P'_H = 0.64 P_H$$

$$\text{TOTAL LATERAL FORCE DUE TO } B-B' = P_H + 0.64 P_H = 1.64 P_H$$

A

THE SAME APPLIES TO C' , AND TOTAL LATERAL FORCE DUE TO $C-C' = P_H + 0.88 P_H = 1.88 P_H$

FROM USS STEEL SHEET PILING DESIGN MANUAL, FIG. 8(a) PAGE 15 AND FIG. 11 PAGE 16:

$$\text{FOR } m = 0.4 \Rightarrow P_H = 0.78 S_P/H$$

$$\text{FOR } m = 0.6 \Rightarrow P_H = 0.45 Q_P/H$$

$$\text{ALSO FOR } m > 0.4, \phi_H = 1.77 \frac{Q_P}{H^2} \frac{m^2 n^2}{(m^2 + n^2)^3}$$

$$\text{FOR } m = 0.6 (> 0.4) \quad \& \quad n = 0.5 \Rightarrow \frac{m^2 + n^2}{(m^2 + n^2)^3} = \frac{(0.6)^2 (0.5)^2}{(0.6^2 + 0.5^2)^3} = \frac{0.09}{0.227} = 0.40$$

$$\text{FOR } m = 0.86 (\text{STILL } > 0.4) \quad \& \quad n = 0.5 \Rightarrow \frac{m^2 n^2}{(m^2 + n^2)^3} = \frac{(0.86)^2 (0.5)^2}{(0.86^2 + 0.5^2)^3} = \frac{0.135}{0.969} = 0.19$$

THE RATIO OF THE COEFFICIENT $m^2 n^2 / (m^2 + n^2)^3$ FOR $m = 0.86 \quad \& \quad m = 0.6 \quad (\& \quad n = 0.5)$ IS $0.19/0.40 \approx 0.5$ WHICH MEANS THAT THE HIGHER m IS, THE SMALLER THE COEFFICIENTS ARE IN THE ϕ_H AND P_H FORMULA. THEREFORE FOR

$$m = 0.86 \Rightarrow P_H = 0.5 [0.45 Q_P/H] \Rightarrow P_H = 0.225 Q_P/H.$$

$$\text{THE SAME APPLIES FOR } m = 12/7' = 1.7 \Rightarrow P_H = 0.01 Q_P/H$$

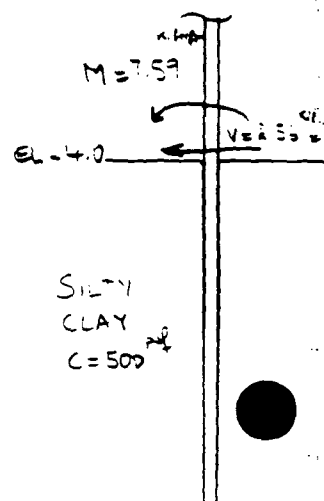
$$\begin{aligned} \text{FROM } B-B' \text{ LOADS, } m = 6/7' = 0.86 \quad \& \quad n = 0.5 \Rightarrow \text{TOTAL } P_H &= 1.64 [0.225 Q_P/H] \\ &= 1.64 [0.225 \times 8^k/7'] = 0.42 \text{ KIP} \end{aligned}$$

$$\begin{aligned} \text{FROM } C-C' \text{ LOADS, } m = 12/7' = 1.7 \quad \& \quad n = 0.5 \Rightarrow \text{TOTAL } P_H &= 1.88 [0.01 Q_P/H] \\ &= 1.88 [0.01 \times 8^k/7'] = 0.02 \text{ KIP} \lll 0.42 \text{ KIP} \end{aligned}$$

THEREFORE, LATERAL FORCE DUE TO DRILL RIG $\approx 0.42 \text{ KIP}$ ACTING AT APPROX. HALF THE HEIGHT $\approx 3.8'$ FROM ELEV. $-4'$

100555

1/4" X 1/4"



By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 4 of 2
 Chkd. By CC Date 12-19-91 SHEET PILE WALL SUPPORT Proj. No. 90-198

1/4" X 1/4"

III. CALCULATIONS FOR DEPTH AND SPACING OF H-PILES.

FROM BROM'S PAPER TITLED LATERAL RESISTANCE OF PILES IN COHESIVE SOILS, PUBLISHED IN THE JOURNAL OF THE SOIL MECHANICS & FOUNDATIONS DIVISION, VOLUME 90 NO 5M2, MARCH 1964 PART 1, PAGE 48:

$$f = \frac{P}{3 C_u D} \quad (\text{EQ. 12})$$

$D = \text{WIDTH OF PILE} = 1'$

$C_u = 0.5 \text{ KSF OF SILTY CLAY}$

$P = V = \text{SHEAR}$

TRIAL 1

ASSUMING H-PILE SPACED EVERY 6 SHEETS = $6 \times 2.3 = 13.8'$

$$\Rightarrow P = 2.56 \text{ K/ft} \times 13.8' = 35.3 \text{ K}$$

$$\Rightarrow f = \frac{35.3}{3 \times 0.5 \times 1} = 7.8'$$

EQ. 13 \Rightarrow

$$M_{\max}^{\text{POS}} = P(e + 1.5D + 0.5f) = 35.3(2.97 + 1.5 \times 1 + 0.5 \times 7.8) = 295 \text{ K} \cdot \text{ft}$$

EQ. 14 \Rightarrow

$$M_{\max}^{\text{POS}} = 2.25 D g^2 C_u \Rightarrow g = \sqrt{\frac{M_{\max}^{\text{POS}}}{2.25 D C_u}} = \sqrt{\frac{295}{2.25 \times 1 \times 0.5}} = 16.2'$$

EQ. 15 \Rightarrow

$$\text{EMBEDMENT DEPTH} = L = 1.5D + f + g = 1.5 \times 1' + 7.8' + 16.2' = 25.5'$$

REANALYSE TO OBTAIN SHORTER LENGTH.

TRIAL 2

REDUCE H-PILE SPACING TO BE EVERY 4 SHEETS = $4 \times 2.3 = 9.2'$

$$\Rightarrow P = 2.56 \text{ K/ft} \times 9.2' = 23.6 \text{ K}$$

$$\Rightarrow f = \frac{23.6}{3 \times 0.5 \times 1} = 5.2'$$

$$M_{\max}^{\text{POS}} = P(e + 1.5D + 0.5f) = 23.6(2.97 + 1.5 \times 1' + 0.5 \times 5.2) = 166.8 \text{ K} \cdot \text{ft}$$

$$g = \sqrt{\frac{M_{\max}^{\text{POS}}}{2.25 D C_u}} = \sqrt{\frac{166.8}{2.25 \times 1 \times 0.5}} = 12.2'$$

$$\text{EMBEDMENT DEPTH } L = 1.5D + f + g = 1.5 \times 1' + 5.2' + 12.2' = 18.9'$$

REANALYSE TO OBTAIN SHORTER LENGTH

100557

By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 5 of 10
 Chkd. By CC Date 12-19-93 SHEETPILE WALL SUPPORT Proj. No. 90-198
 1/4" X 1/4"

TRIAL 3

REDUCE H-PILE SPACING TO EVERY 3 SHEET = $3 \times 2.3 = 6.9'$

$$\Rightarrow P = 2.56 \text{ k/ft} \times 6.9' = 17.66 \text{ k}$$

$$\Rightarrow f = \frac{17.66}{9 \times 0.5 \times 1} = 3.9'$$

$$M_{\text{MAX}}^{\text{POS}} = P(e + 1.5D + 0.5f) = 17.66(2.97' + 1.5 \times 1' + 0.5 \times 3.9') = 113.4 \text{ k-ft}$$

$$g = \sqrt{\frac{M_{\text{MAX}}^{\text{POS}}}{2.25 D C_u}} = \sqrt{\frac{113.4}{2.25 \times 1 \times 0.5}} = 10'$$

$$\text{EMBEDMENT DEPTH } L = 1.5D + f + g = 1.5 \times 1' + 3.9' + 10' = 15.4' \quad \underline{\text{OK}}$$

$$\Rightarrow \text{TOTAL H-PILE LENGTH} = 15.4' + 7.5' = 22.9'$$

◦ USE 23' LONG H-PILE AT EVERY THIRD POCKET (6.9' APART)
 ALONG DEFLECTED SHEETPILE SECTION

NOTE: ANALYSIS OF THE STABILITY OF THE H-PILES USING BROM'S METHOD HAS A BUILT-IN FACTOR OF SAFETY OF $11.42/9 = 1.27$ (PAGE 49, SAME REFERENCED PAPER). THE ANALYSIS ALSO ASSUMES THAT THE H-PILES WILL CARRY THE ENTIRE LOAD. IN REALITY, THE DEFLECTED SHEETPILES WILL PROVIDE ADDITIONAL PASSIVE RESISTANCE AND CARRY SOME OF THE SURCHARGE LOADS, THEREBY PROVIDING AN EVEN GREATER STABILITY.

H-PILE SIZE:

$$M = 113.4 \text{ k-ft}$$

$$S'_{\text{required}} = \frac{113.4 \text{ k-ft} \times 12 \text{ in/ft}}{24 \text{ ksi}} = 56.7 \text{ in}^3$$

100558

USE HP 12x53 OR EQUIVALENT

$$S_x = 66.8 \text{ in}^3 > 56.7 \quad \underline{\text{OK}}$$

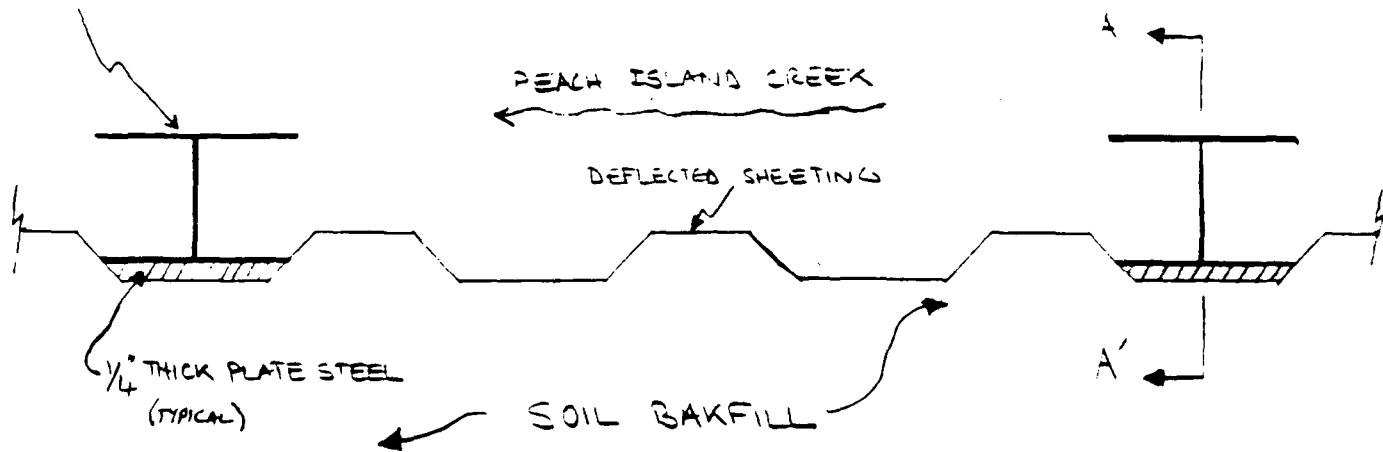
By H.1 Date 12/19/91 Subject SCP CARLSTADT Sheet No. 6 of 10
 Chkd. By CC Date 12-12-91 SHEETPILE WALL SUPPORT Proj. No. 90-153

1/4" X 1/4"

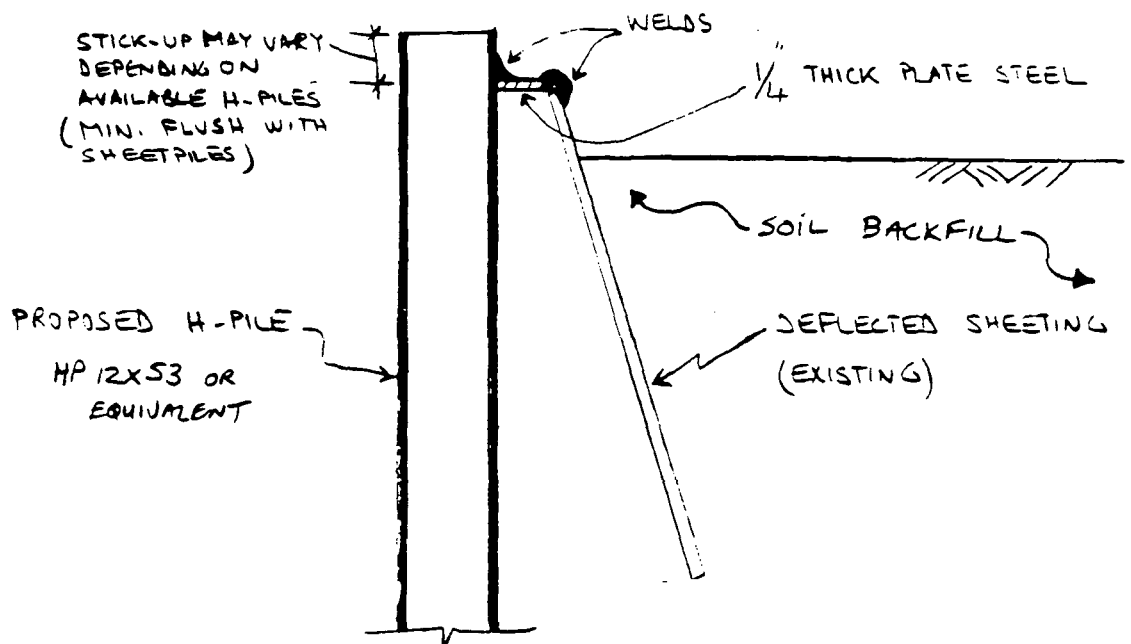
IV. BRACING METHOD:

PROPOSED INSTALLATION - PLAN VIEW

H-PILE (DRIVE EVERY THIRD POCKET)



SECTION A-A'

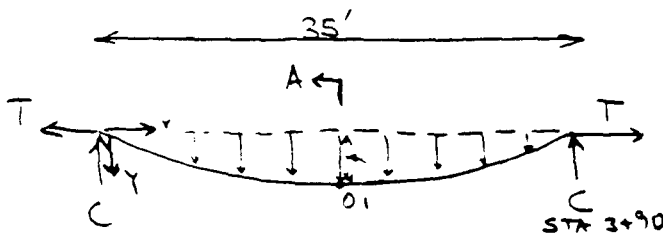


By UH Date 12/14/91 Subject SCP CARLSTADT Sheet No. 7 of 12

Chkd. By CC Date 12-19-19 SHEETPILE WALL SUPPORT Proj. No. 90-198

1/4" X 1/4"

II. INTERLOCK TENSION DUE TO SHEETING BOWED OUT



THE BOWED OUT PORTION HAS MAXIMUM HORIZONTAL MOVEMENT = 3' AT TOP OF MIDDLE POINT OF 35' SPAN.

STA. 3+55 $A' \leftarrow$ $D = 3'$ AT TOP (MEASURED)
 $D = 0$ AT 8.5' DEPTH

PLAN VIEW OF DEFLECTED SHEETPILE

ANGLE OF ROTATION AS MEASURED IN FIELD $\theta = 19.5^\circ$

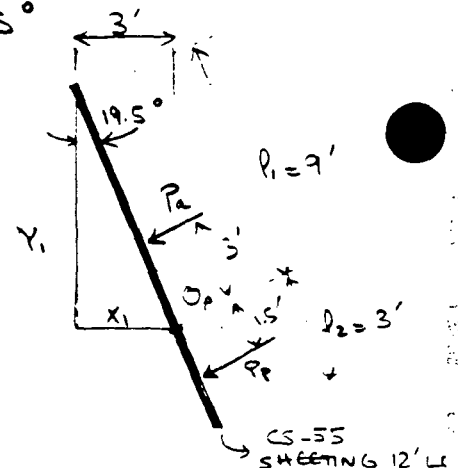
$$x_1 = 3' = 36''$$

$$y_1 = \frac{x_1}{\tan 19.5^\circ} = \frac{36''}{0.354} = 101.7'' = 8.5'$$

$$l_1 = \sqrt{x_1^2 + y_1^2} = \sqrt{(3')^2 + (8.5')^2} = 9'$$

TOTAL LENGTH OF SHEETING = $l_0 = 12'$

$$l_2 = l_0 - l_1 = 12' - 9' = 3'$$



PASSIVE RESISTANCE IN THE l_2 PORTION:

$$P_p = \frac{1}{2} K_p \delta_3 (l_2)^2 + 2c \sqrt{K_p} (l_2) + q K_p (l_2) \quad \text{[PR. 171 TERZAGHI & PECK, SOIL MECH. IN ENG'G PPL.]}$$

$$= \frac{1}{2} (1) (0.0476) (3')^2 + 2 (0.5) \sqrt{1} (3) + (3.5 \times 0.060 + 4 \times 0.0176 + 1 \times 0.0476) \times 1$$

$$= 4.2 \text{ k/ft}$$

ACTIVE LOAD ON THE l_1 PORTION:

$$P_a = 2.56 \text{ k/ft} \quad (\text{SEE SHEET 3 OF 9})$$

OVERTURNING MOMENT ABOUT PIVOT POINT O_p :

$$M_{op} = P_a \times \text{Moment Arm} = 2.56 \times 3' = 7.7 \text{ k ft / ft of wall}$$

RESISTING MOMENT ABOUT PIVOT POINT O_p :

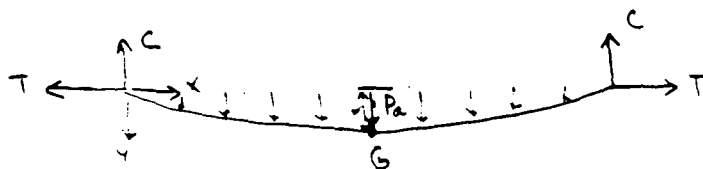
$$M_R = P_p \times \text{Moment Arm} = 4.2 \text{ k/ft} \times 1.5' = 6.3 \text{ k ft / ft of wall}$$

By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 8 of 1
 Chkd. By CC Date 12-19-93 SHEETPILE WALL SUPPORT Proj. No. 90-193

1/4" X 1/4"

THE UNBALANCED MOMENT $7.7 - 6.3 = 1.4 \text{ K.FT/FT}$ IS ABSORBED BY TENSION IN SHEETING.

$$P_a = \frac{1.4}{3'} = 0.47 \text{ K/FT}$$



$D = 3'$ AT TOP

$D = 0$ AT 8.5' DEPTH
OR 9' ALONG SHEETING

P_a GIVES ZERO PRESSURE AT TOP WITH MAX D , AND MAX PRESSURE AT $L = 9'$ WITH $D = 0$. THEREFORE USE AVERAGE D FOR SHEETING STRESS ANALYSIS.

EQUATION OF PARABOLA $y = \frac{4D}{L^2} x (L - x)$

AT $x = \frac{L}{2}$ $y = \frac{4D}{L^2} \left(\frac{L}{2}\right) \left(L - \frac{L}{2}\right) = \frac{4D}{L^2} \left(\frac{L}{2}\right) \left(\frac{L}{2}\right) = D$

AT $x = L$ $y = \frac{4D}{L^2} (L)(L - L) = 0$

$$\Sigma V = 0 \Rightarrow C = P_a \frac{L}{2} = P_a \frac{35'}{2} \Rightarrow \boxed{C = 17.5 P_a}$$

SHEETING INTERLOCKS MOMENT = 0

$$\Rightarrow \Sigma M_G = 0$$

$$\Rightarrow C \times 35'/2 - P_a \times 35'/2 \times 35'/4 - T \times 3'/(2) = 0$$

$$\Rightarrow 17.5 P_a \times 17.5 - 153 P_a - 1.5 T = 0$$

$$\Rightarrow 153 P_a = 1.5 T$$

$$\Rightarrow \boxed{T = 102 P_a}$$

(T CAN ALSO BE RELATED TO P_a FROM THE SUSPENSION CABLE THEORY)

$$T = \frac{P_a C^2}{8 D} = \frac{P_a (35')^2}{8 \times 1.5'} = 102 P_a$$

By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 9 of 10
 Chkd. By CC Date 12-19-19 SHEETPILE WALL SUPPORT Proj. No. 90-193
 1/4" X 1/4"

$$\text{RESULTANT TENSION IN THE SHEETING } T_R = \sqrt{C^2 + T^2}$$

$$T_R = \sqrt{(17.5 \text{ Pa})^2 + (102 \text{ Pa})^2} = 103 \text{ Pa} = 103 \times 0.47 = 48.4 \text{ k/ft}$$

$$= 5.38 \text{ k/ft}$$

$$= 0.45 \text{ k/in}$$

$$\text{THICKNESS OF CS-SS SHEETING} = 0.197''$$

$$\Rightarrow \text{SHEETING TENSILE STRESS} = \frac{0.45 \text{ k/in}}{0.197''} = 2.28 \text{ ksi} < 0.66 F_y$$

$$= 2.28 \text{ ksi} < 0.66 \times 50 \text{ ksi}$$

$$= 2.28 \text{ ksi} < 33 \text{ ksi}$$

INTERLOCK TENSILE STRESSES ARE MUCH SMALLER THAN ALLOWABLE DESIGN STRESS, THEREFORE, NO NEED FOR BRACING BETWEEN H-PILES.

By HH Date 12/19/91 Subject SCP CARLSTADT Sheet No. 10 of 10
 Chkd. By CC Date 12-19-91 SHEET PILE WALL SUPPORT Proj. No. 20-152
 1/4" X 1/4"

CORROSION EFFECT

FROM PILE BUCK ANNUAL PAGE 322 \Rightarrow

AVERAGE CORROSION OF SHEETPILES IN SALT WATER IS 0.002 - 0.004 in/YEAR

MOST CORROSION IS ON THE FRONT FACE OF THE SHEET PILE.

THICKNESS OF SHEETPILE = 0.197" \ggg 0.002 - 0.004 in/YR

$$\text{THICKNESS OF SHEET REQUIRED TO SUPPORT THE TENSILE STRESSES} = \frac{0.45 \frac{\text{k/in}}{\text{ksi}}}{33 \text{ ksi}} \left(\begin{array}{l} \text{SEE SHEET} \\ 9 \text{ OF } 10 \end{array} \right)$$

$$= 0.014"$$

$$\text{THICKNESS OF SHEET REQUIRED TO SUPPORT THE SHEAR STRESSES} = \frac{0.47/12 \frac{\text{k/ft}}{\text{ksi}}}{0.4 F_y} \left(\begin{array}{l} \text{SEE SHEET} \\ 8 \text{ OF } 9 \end{array} \right)$$

$$= \frac{0.039 \frac{\text{k/in}}{\text{ksi}}}{20 \text{ ksi}}$$

$$= 0.002"$$

THE TIME NECESSARY FOR THE SHEETPILE TO DETERIORATE TO THE POINT WHERE TENSILE STRESSES WOULD BE A CONCERN, i.e. FROM 0.197" (SHEET THICKNESS) TO 0.014", AT A RATE OF 0.004"/YR, WOULD BE \approx 45 YEARS WHICH IS SIGNIFICANTLY GREATER THAN THE DURATION OF THE INTERIM REMEDY. THEREFORE, CORROSION WOULD NOT BE A CONCERN DURING THE EXPECTED LIFE OF THIS INTERIM REMEDY.

January 15, 1992

Canonie Environmental Services Corp
500 North Gulph Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551
Fax: 215-337-0560

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 18 - Addendum 1
Deflected Sheet Pile Restoration
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) has undertaken the driving of the H-piles along the sheet pile sections between sheets 155 to 170 and 181 to 191 in accordance with Modification Number 18, dated December 20, 1991. During driving of the H-piles along the section from sheets 155 to 170, the gabion basket which is approximately present between sheets 157 to 159 interfered with pile driving activities, therefore the H-pile spacing proposed in Modification Number 18 was unobtainable. As a result, Canonie is proposing to drive H-piles at the spacing indicated on the attached drawing, which will result in the driving of seven instead of six H-piles along this section. This pile spacing will result in a tributary load being applied to the H-piles which are either equal to or less than those which would have been applied utilizing the pile spacing originally proposed.

If you have any further question, please contact me at (215) 337-2551.

Very truly yours,

Joseph E. Mihm / FJC
Joseph E. Mihm, P.E.
Project Manager

JEM/fq

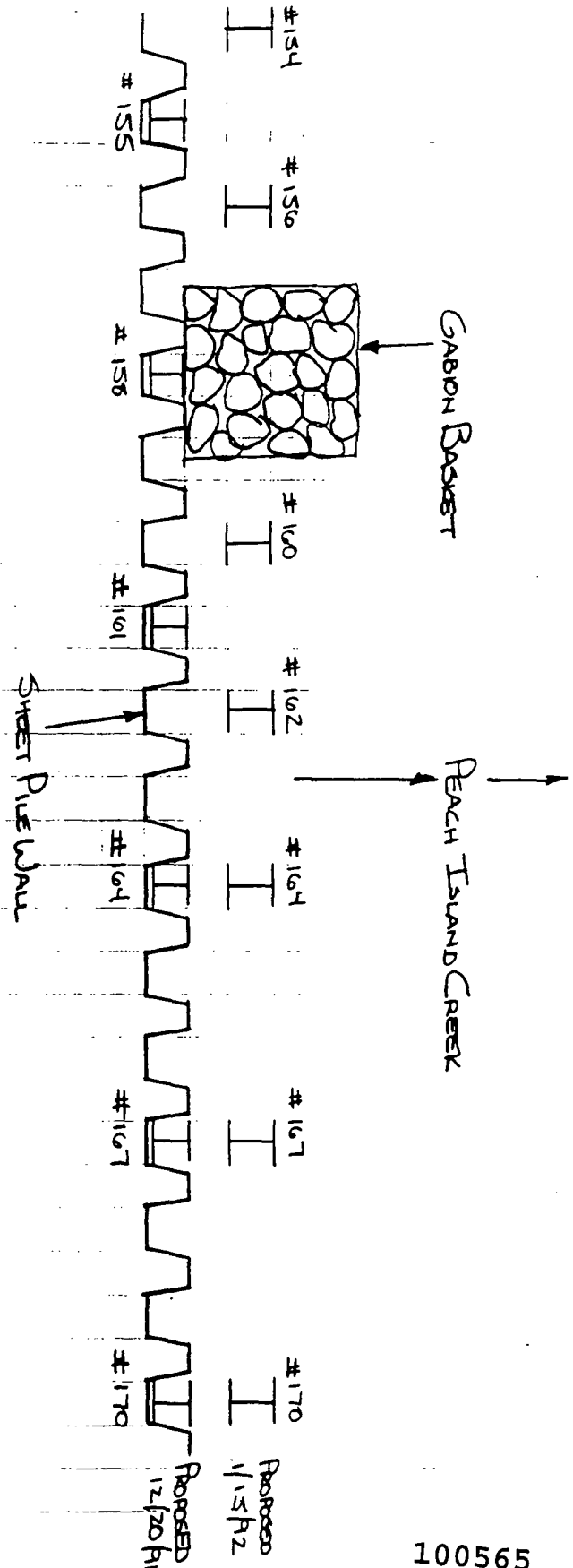
Attachment

cc: Curt DeWolf - Canonie
Frank Gontowski - Canonie
Peter F. Porter - Canonie
James Semple - Canonie

By FIG Date 1/15/92 Subject SCP CARLSTADT Sheet No. 1 of 1

Chkd. By _____ Date _____ H-PILE LOCATION DWG. Proj. No. 90-198

1/4" X 1/4"



January 10, 1992

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 19
Additional FML Bottom Anchor
SCP Carlstadt Superfund Site

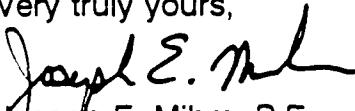
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to utilize an additional anchor with the Gundwall sheets. Gundle Lining Systems, Inc. (Gundle) initially utilized a single anchor located at the bottom of the Gundwall sheets, but later initiated utilization of a second anchor located approximately one foot above the bottom anchor. This second anchor consists of an approximately 120-millimeter thick "hooked" high density polyethylene section which is extrusion-welded across the entire length of the sheet. The additional anchor is being utilized to help overcome problems with sheet adhesion to the insertion plate during retraction from the slurry wall. Gundle has demonstrated in the field that this additional anchor helps to alleviate the problem.

Gundle would also request that they be allowed to discontinue utilization of the additional anchor if it is no longer deemed necessary.

If you have any further questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/bm

cc: Curtis DeWolf, Canonie
Frank Gontowski, Canonie
Peter Porter, Canonie

Canonie Environmental

January 10, 1992

Canonie Environmental Services Corp.
2000 Edison Road, Suite 100
Paterson, New Jersey 07651

TEL: (215) 337-2551
FAX: (215) 337-2551

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification No. 20
Anchor Trench Backfill Material
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

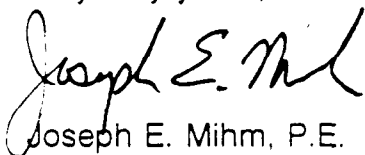
Canonie Environmental Services Corp. (Canonie) intended to backfill the infiltration barrier anchor trench with material removed during the excavation of this trench. However, much of this material has been found to be composed predominantly of miscellaneous fills and debris which may not provide adequate anchoring capacity for the infiltration barrier if utilized as trench backfill.

Therefore, Canonie is requesting approval to utilize the non-contaminated crushed stone from the staging area for use as anchor trench backfill in areas where unsuitable backfill material was encountered during anchor trench excavation. The determination of where unsuitable anchor trench backfill materials were encountered will be performed by Canonie.

Additionally, Canonie is also requesting approval to utilize non-contaminated crushed stone from the staging area for grading the parking areas outside of the current fence line along Paterson Plank Road.

If you have any further question, please contact me at (215) 337-2551.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/mh

100567

Canonie Environmental

Canonie Environmental Services Corp.
500 North Gulph Road Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551
Fax: 215-337-0560

January 22, 1992

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 21
Replacement of Piezometer P-9
SCP Carlstadt Superfund Site

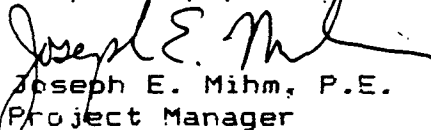
Dear Dr. Murphy:

Canonie Environmental Services Corp. requests approval to replace piezometer P-9, which was damaged during the construction activities. Replacement of this piezometer is planned for the week of January 20, 1992 (while the drilling rig is being utilized for the replacement of monitoring wells MW-1S and MW-6S). The replacement piezometer will be drilled within approximately 15-feet of the existing piezometer and will be installed in accordance with the attached "Log of Borings and Monitoring Well Details" by Dames and Moore for P-9.

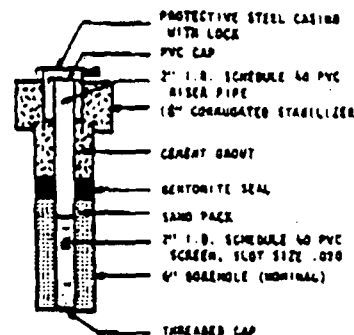
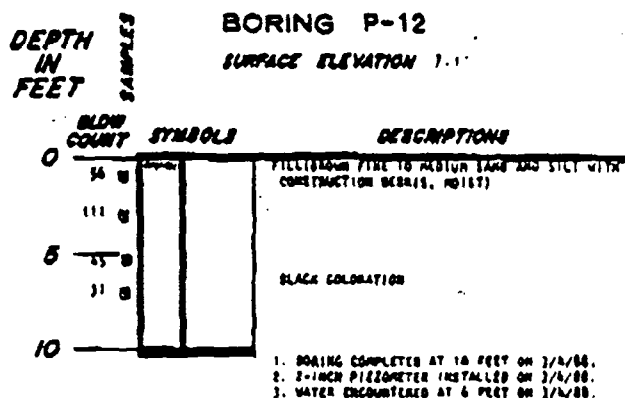
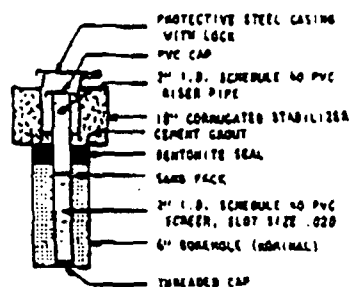
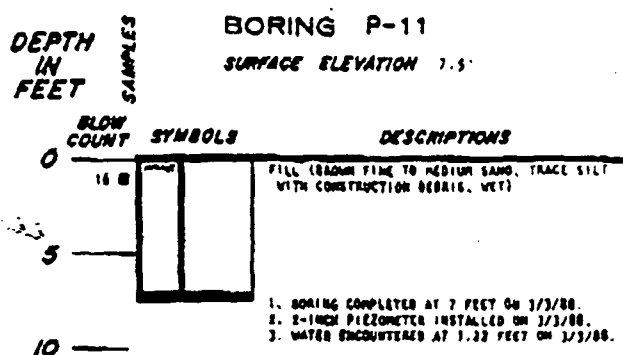
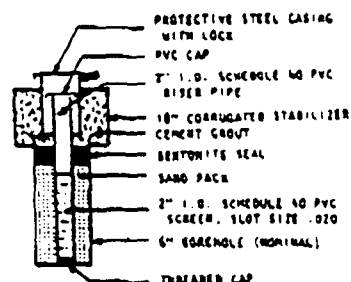
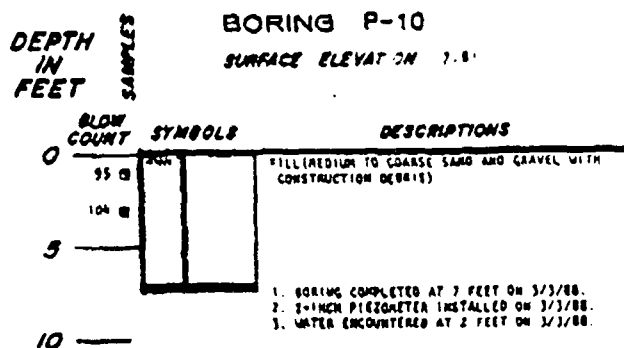
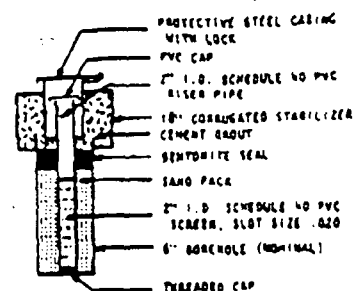
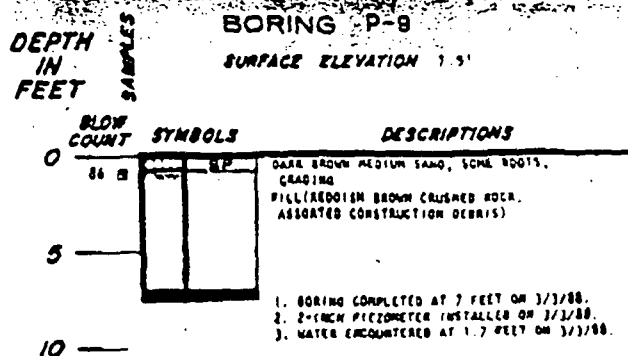
Piezometer installation will be performed by a licensed New Jersey well driller utilizing an approximately 6-inch to 8-inch diameter borehole. Existing piezometer P-9 will be abandoned by grouting in accordance with N.J.A.C. 7.9-9.1. An abandonment form for P-9 and a permit form for the replacement piezometer will be prepared by a licensed New Jersey well driller.

If you should have any further questions, please contact me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

100568



LOG OF BORINGS AND MONITORING WELL DETAILS

Canonie Environmental

A-60

March 11, 1992

Canonie Environmental Services, Inc.
400 North Guilford Road, Third Floor
P.O. Box 41, Piquette, Pennsylvania 19350
Phone: (215) 337-2551
Fax: (215) 337-1500

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

MODIFICATION REQUEST No. 24
Ground Water Elevations
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Attached please find a table showing the historical water table elevations at the SCP Carlstadt Superfund Site, including the April 1991 set of readings by Langan Environmental Services, Inc. Canonie Environmental Services Corp. (Canonie) has been monitoring the water levels since late January. The data shows that there has been little to no change in the water table elevations at the site over the past month.

The minimum available freeboard (distance between water table and top of slurry wall) at the site, however, is less than was previously reported. This difference is due to a mathematical error detected in the surveyors' notes which Canonie identified during the quality assurance/quality control review of data. Canonie has collected additional field surveying information to verify the water table elevations as shown in Table 1. The data shows that the amount of freeboard between Stations 17+00 and 18+00 of the slurry wall is less than six inches.

Canonie recommends that we begin temporary dewatering using monitoring well MW-6SR to further control ground water. Canonie would install a submersible pump in MW-6SR and initiate pumping of ground water to the holding tank at the job site. Dewatering would be conducted daily during the hours that Canonie personnel are on-site to monitor

100570

Donald J. Murphy, Ph.D., P.E.

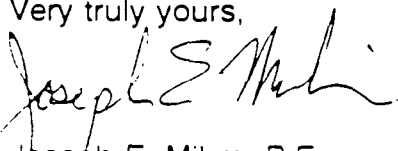
2

March 11, 1992

the operations. Canonie will also monitor the resulting impacts to the surrounding monitoring wells. This temporary operation will continue until water levels in MW-6SR (during non-pumping) stabilize at approximate elevation 3.0.

Canonie is prepared to begin the dewatering operations as soon as possible. Collected ground water will be transported to the Dupont Environmental Services Deepwater, New Jersey facility as each 5,000 gallon volume is collected. Please advise me when approval has been granted to proceed forward with this activity.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/siz

Attachment

100571

CanonieEnvironmental

TABLE 1
TABLE OF GROUND WATER ELEVATIONS
SCP CARLSTADT SITE

WELL/ PIEZO #	TOP OF INNER WELL/PIEZO CASING ELEV (ft)	APRIL 1992	JANUARY 31, 1992		FEBRUARY 7, 1992		FEBRUARY 24, 1992		MARCH 8, 1992	
		GROUNDWATER ELEV (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV (ft)
MW 1SR	11.40	6.7	5.3	6.2	5.8	5.9	5.5	6.0	5.3	6.2
MW 2S	12.26	7.0	5.9	6.4	6.0	6.3	5.7	6.6	5.4	6.9
MW 3S	12.61	4.8	7.4	5.2	7.6	5.0	7.6	5.0	7.6	5.0
MW 4S	13.80	6.5	7.3	6.6	8.0	5.9	7.5	6.4	7.4	6.5
MW 5S	10.44	3.8	6.4	4.0	6.4	4.0	6.4	4.0	6.3	4.1
MW 6SR	7.81	2.8	4.3	3.5	4.4	3.4	4.3	3.5	4.2	3.6
MW 7S	11.15	4.1	5.1	6.1	5.7	5.5	5.0	6.2	5.1	6.1
P 2	12.83		6.3	6.5	6.6	6.2	6.6	6.2	6.4	6.4
P 3	13.38		6.4	5.0	6.7	4.7	6.5	4.9	6.5	4.9
P 4	11.61		5.2	6.4	5.4	6.2	5.0	6.6	4.8	6.8
P 5	8.67									
P 6	10.79		4.9	5.9	5.0	5.8	4.8	6.0	4.6	6.2
P 8	11.75		5.5	6.3	5.7	6.1	5.7	6.1	5.5	6.3
P 9	10.85		4.1	6.8	4.4	6.5	4.1	6.8	3.8	7.1
P 10	11.30				7.3	4.0	7.0	4.3	6.9	4.4
P 11	12.05				6.7	5.4	6.6	5.5	6.5	5.6
P 14	10.39		6.4	4.0	6.4	4.0	6.3	4.1	6.3	4.1

100572

April 7, 1992

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 25
Infiltration Barrier Membrane Weighting System
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to modify the sandbag membrane weighting system specified in the IRRDR with a combination of sandbags and water-filled HDPE tubes (tubes). The tubes will be fabricated as indicated in Attachment 1. The tubes will be placed across the site using various lengths to accommodate the final grading profile and discharge piping layout. These tubes will generally be placed at approximately 50 feet on-center spacings in lieu of the proposed sandbags.

The sandbags presently at the site will be utilized to maintain the positioning of the tubes and for ballast at protrusions through the infiltration barrier. The HDPE tubes will be filled with water to provide an equivalent membrane weighting system to protect the liner against uplift pressures.

Canonie also requests approval to modify the cover method over the T-5 roll-off as shown in Attachment 2. This cover method, used in lieu of the wood framing, will provide additional resistance to wind uplift, as well as provide a more water-tight joint. Additionally, the anchorage method indicated will take advantage of the integrity of the concrete slab under the T-5 roll-off, and provide easy access to the roll-off in the future.

100573



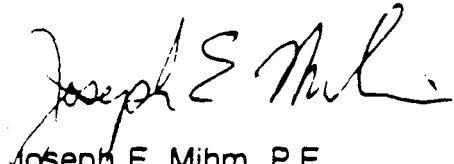
Donald J. Murphy, Ph.D., P.E.

2

April 7, 1992

If you have any further questions, please contact me at (215) 337-2551.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

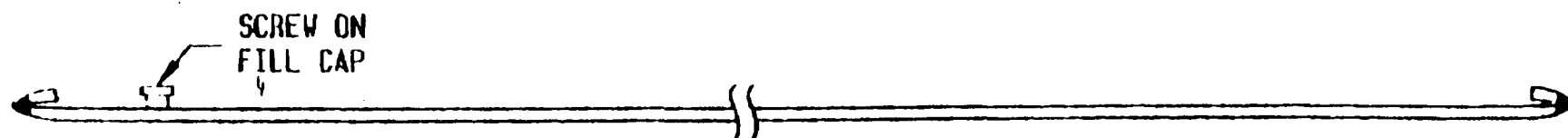
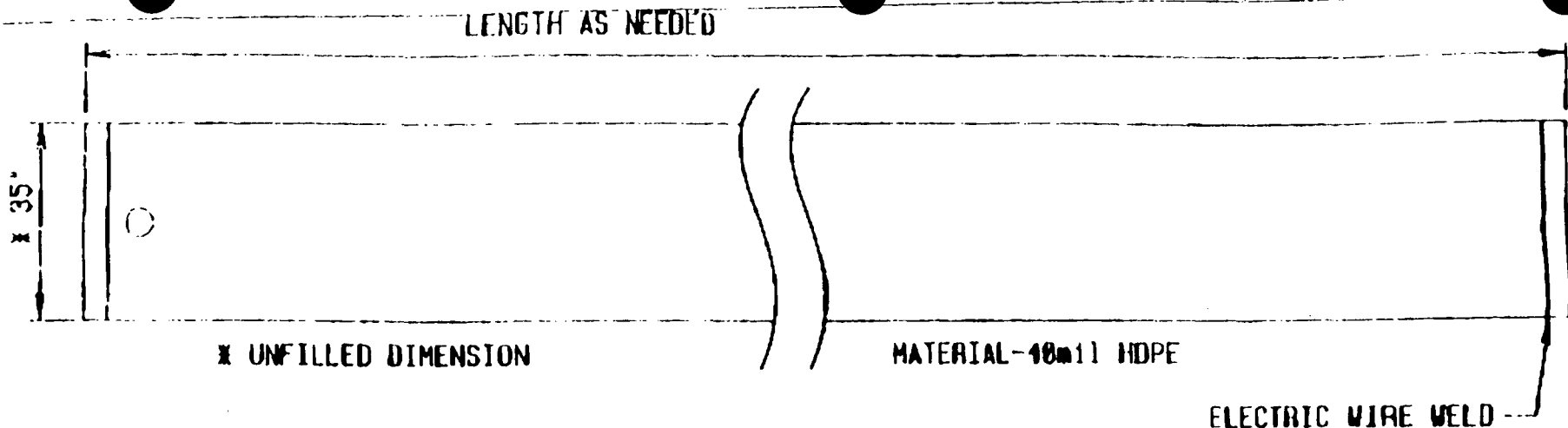
JEM/siz

Attachments

100574


CanonieEnvironmental





ATTACHMENT 1

100575

 <small>DRS. J. M. P. 11/11</small>	DATE: 4-03-92
	DRAWING NO. K.D.-18
	APPROVED BY:

Canonie Environmental

April 9, 1992

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

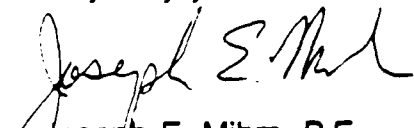
Modification Number 26
T-5 Roll-Off Cover
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. requests approval to modify the cover method over the T-5 roll-off as shown in Attachment 1. This cover method will be used in place of the wood framing called for in the Interim Remedy Remedial Design Report. This anchor method will provide additional resistance to wind uplift, as well as provide a more water-tight joint. Additionally, the anchorage method indicated will take advantage of the integrity of the concrete slab under the T-5 roll-off, and provide easy access to the roll-off in the future.

If you have any further questions, please contact me at (215) 337-2551.

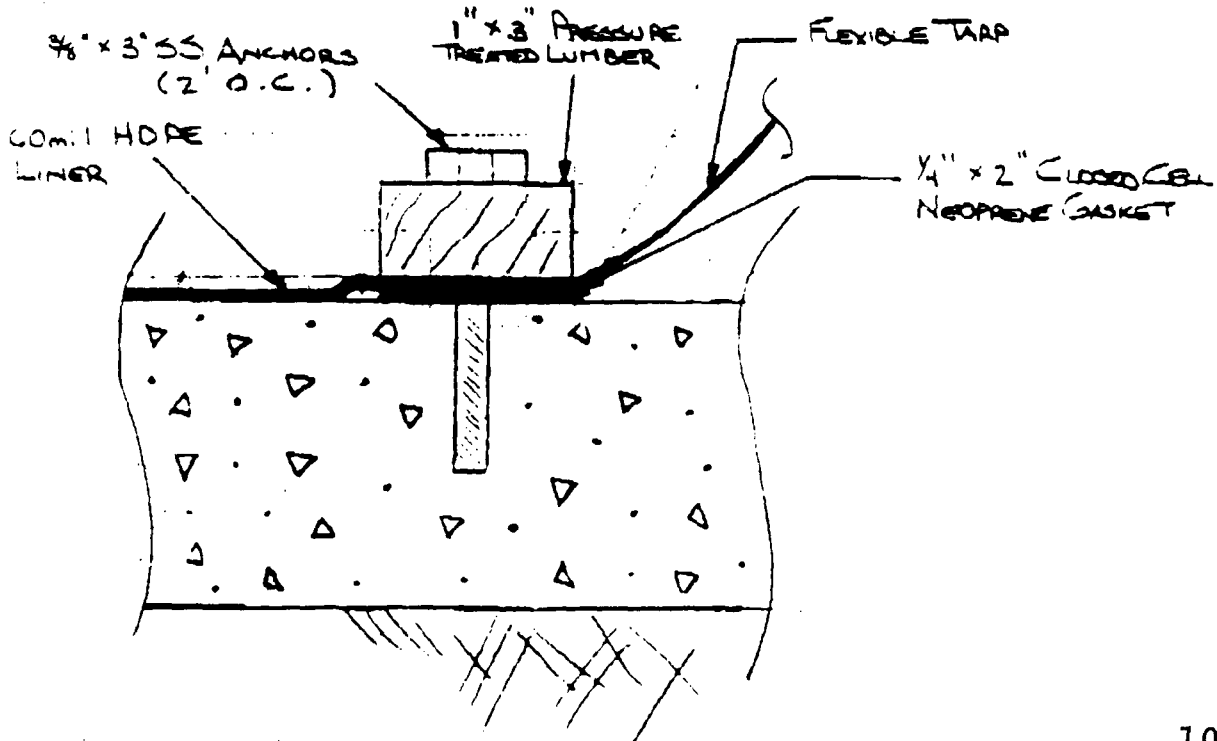
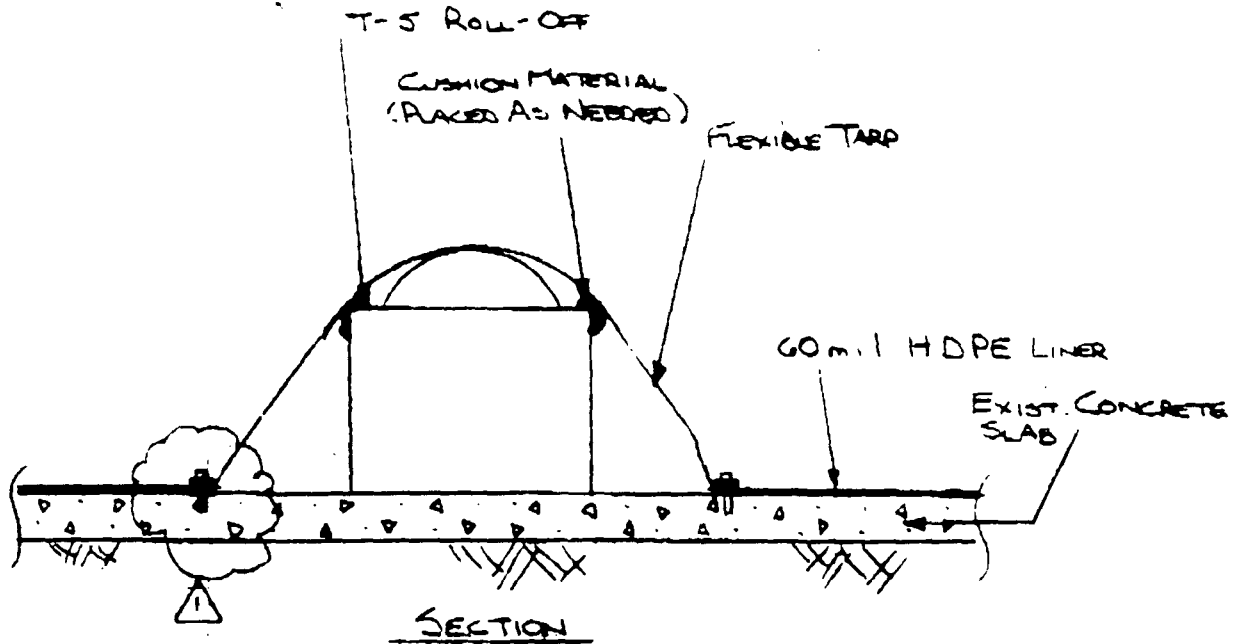
Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/slz

Attachment

By FKG Date 4/1/92 Subject T-S Roll-Off Cover Sheet No. 1 of 1
 Chkd. By _____ Date _____ SCP CARLSTADT Proj. No. 90-193
 1/4" X 1/4"



100577



Canonie Environmental

April 10, 1992

90-198

Donald J. Murphy, Ph.D, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

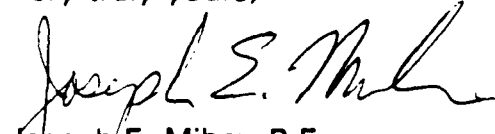
Modification Number 27
Exemption from Taking Water Level Measurements
in the Seven On-Site Ground Water Extraction Wells
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) submits this modification at your request. It is our understanding that your representatives informally agreed with a New Jersey Department Environmental Protection and Energy representative involved with this project, that measuring ground water levels in the on-site, sealed head, extraction wells is not practical. Canonie herein requests formal approval of this modification to delete the measuring of ground water levels in the seven on-site extraction wells, as is otherwise required in Sections 5.2.1 and 5.2.2 of the Operations and Maintenance Plan.

If you have any questions on this matter, please call me.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

100578



Canonie Environmental

May 1, 1992

90-198

Donald J. Murphy, Ph.D, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

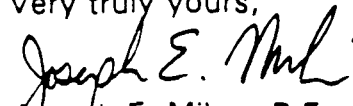
Modification Number 28
Fencing Layout Around Dewatering Holding Tank
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to modify the fencing layout around the dewatering holding tanks as indicated on the attached drawing. Additionally, the discharge pipe to be utilized during offloading from the holding tank to the vacuum tanker will also be modified to re-align its connecting location, as indicated. These modifications will allow the ground water hauler to offload without entering the site, as well as eliminate the loading hose access area, which could act as a point of entry into the site.

If you should have any questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

Attachment

cc: Curt DeWolf, Canonie
Frank Gontowski, Canonie
James Semple, Canonie

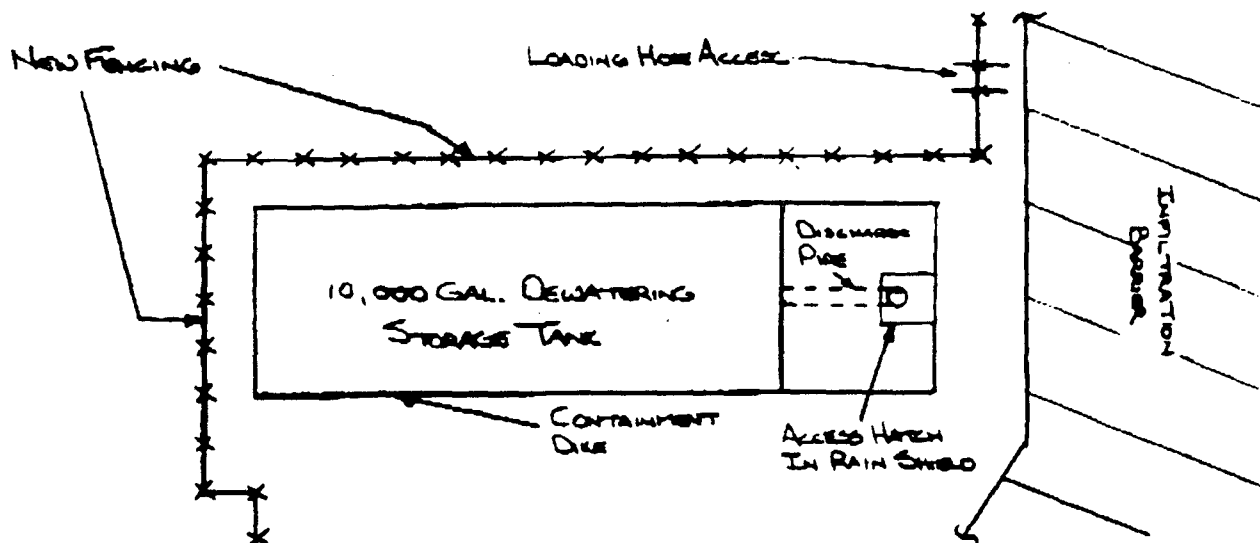
By FUG Date 1/30/92 Subject MODIFICATION TO FENCING LAYOUT Sheet No. 1 of 1

Chkd. By Date ADDING DEWATERING STORAGE Proj. No. 90-198

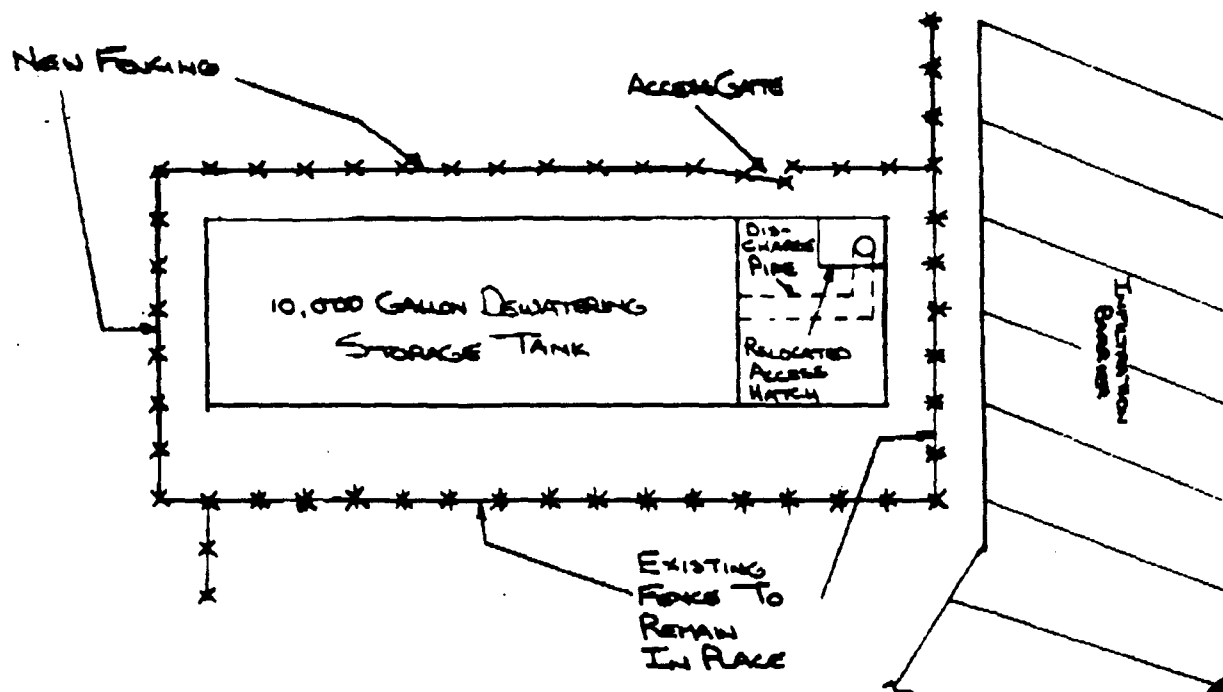
TANK

1/4" X 1/4"

EXISTING FENCING LAYOUT PER DWG. 11 OF 14



PROPOSED MODIFICATION TO FENCING LAYOUT



NOTE: THE DISCHARGE PIPE CONNECTION WILL HAVE A MINOR MODIFICATION TO REALIGN ITS POSITION WITHIN THE SECONDARY CONTAINMENT AREA. THIS MODIFICATION TO THE DISCHARGE PIPE SIMPLY INVOLVES ADDING A 90° ELBOW AND SHORT SECTION OF PIPE.

Canonie Environmental

May 1, 1992

Canonie Environmental
100 North 1st Street
P.O. Box 1000
Pittsburgh, PA 15224

90-198

Donald J. Murphy, Ph.D, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 29
Anchor Trench Erosion Control
SCP Carlstadt Superfund Site

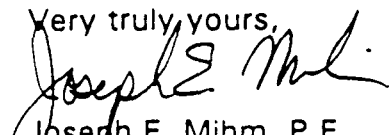
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval to install additional high-density polyethylene (HDPE) sheeting along Peach Island Creek as indicated on the attached drawing. The purpose of this sheet will be to reduce the potential for any erosion to the anchor trench by the lateral movement of runoff along the sheetpile wall. The HDPE sheet will be extrusion welded to the infiltration barrier and will be secured with sand bags. Additionally, the HDPE sheet will run under the fence fabric placed along Peach Island Creek to provide additional uplift protection.

Since the installation of the HDPE sheet will be a non-critical installation, the extrusion welds will not be field or laboratory tested. Canonie will attempt to utilize any remaining HDPE sheets left over from the installation of the infiltration barrier. If additional HDPE is required, Canonie may choose to utilize HDPE which meets the project specifications.

If you should have any questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

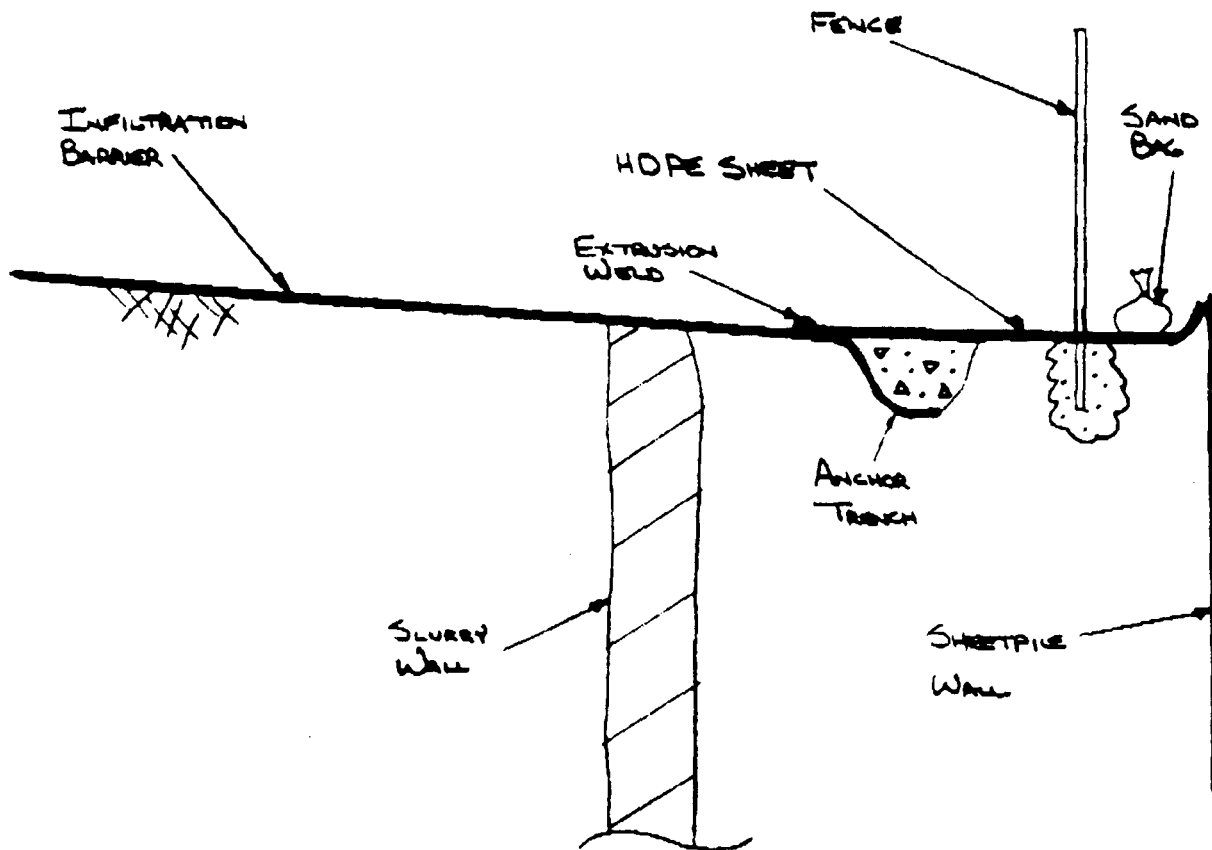
Attachment

cc: Curt DeWolf, Canonie
Frank Gontowski, Canonie
James Semple, Canonie

100581

Canonie

By FJG Date 4/30/92 Subject EROSION CONTROL FOR ANCHOR Sheet No. 1 of 1
Chkd. By Date TRENCH ALONG PEACH ISLAND Proj. No. 90-198
CASEY 1/4" X 1/4"



Canonie Environmental

Canonie Environmental Services Corp.
500 North Gulph Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551
Fax: 215-337-0560

June 2, 1992

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Number 32
Dewatering System Piping Layout
SCP Carlstadt Superfund Site

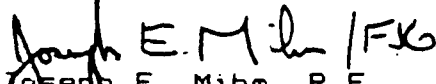
Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests permission to modify the layout of the dewatering system piping as indicated on the attached drawing. These modifications are necessitated by the topography achieved during site grading. The modified piping layout will prevent the pipes from being elevated excessively above the infiltration barrier.

The existing piping layout required back-drainage to monitoring wells MW-1, MW-5 and MW-6 in case of a power failure. The revised piping layout would allow for drainage to monitoring wells MW-2, MW-5 and MW-6 instead. Accordingly, the 1/8-inch two way solenoid normally open valve for MW-1 will be relocated to MW-2.

If you should have any questions, please contact me at
(215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

Attachment

JEM/fg

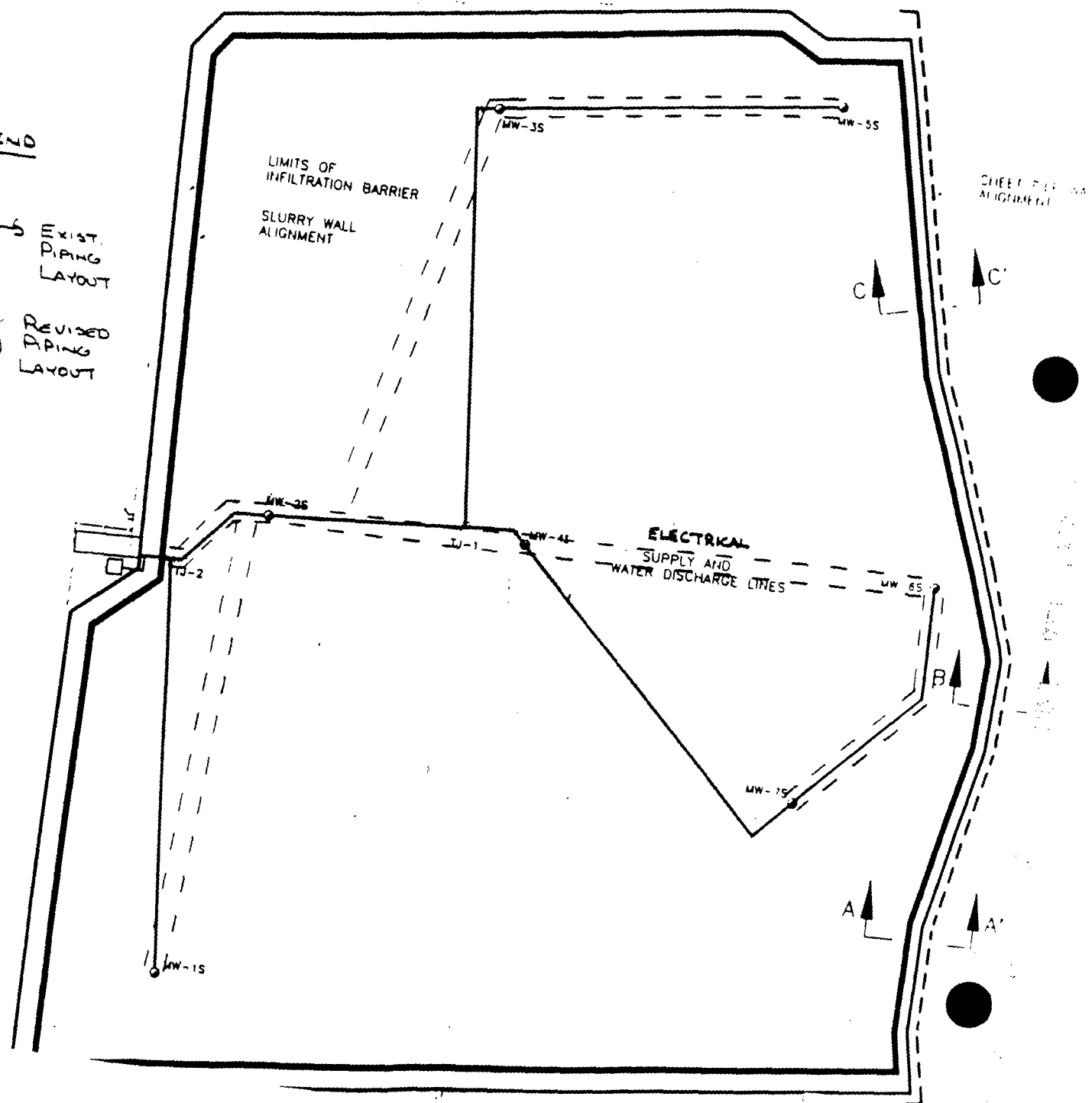
100583

REVISED DEWATERING PIPING
SYSTEM LAYOUT
SCP CARLSTADT SUPERFUND PROJECT

LEGEND

—> EXIST.
PIPING
LAYOUT

[-] REVISED
PIPING
LAYOUT



Canonie Environmental

Canonie Environmental Services Corp.
500 North Gulph Road Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215 337 2551
Fax: 215 337 0560

June 2, 1992

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

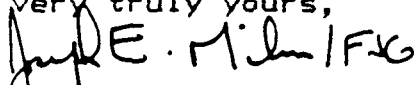
Modification Number 33
Dike Level Switch
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) is proposing a modification to the position of the dike level switch as indicated by Note 1 on sheet 11 of 14 of the Construction Drawings. This note currently indicates that the dike level switch is to be positioned 2 feet above the floor of the dike. However, the dike level switch should be positioned approximately 8 to 12 inches above the floor of the dike in order to prevent the water level in the dike from rising to a level which may damage the heat tracing on the discharge pipe from the containment tank. The dike level switch will be attached to a support leg of the containment tank or some other logical location.

If you have any questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/fg

cc: Curt DeWolf - Canonie
Frank Gontowski - Canonie
James Semple - Canonie

100585

Canonie Environmental

June 23, 1992

90-198

Dr. Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, N.J. 07407

Modification Request #34
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests approval of the following minor modifications to the Interim Remedy Remedial Design Report. These minor modifications were recently discussed at the weekly progress meetings and agreed to in concept. They include:

- o Deletion of the two concrete guard posts that were to be positioned in from of the temporary holding tank. These guard posts are no longer required since the chain link fencing provides this protection.
- o Eliminating the electrical quick disconnects inside the well box and hard wiring the well pump directly to the controls. Placing a NEMA4 junction box on the outside of each well box.
- o Use of 1/2 horsepower electrical submersible pumps in place of the specified 1/3 horsepower pumps. These pumps are equivalent in all aspects except for the increased horsepower rating.
- o Addition of a stainless steel cable within the well casing for the purpose of supporting and/or retrieving the electric pumps.
- o Use of braided electrical heat trace tape in lieu of the PVC jacketed heat trace tape to comply with local electrical requirements. The braided heat tape would lie on the HDPE pipe as a straight run and not as a coil.

Dr. Donald J. Murphy, Ph.D., P.E.

2

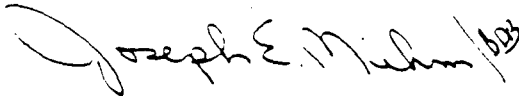
June 23, 1992

- o Addition of a 3 inch check valve in the discharge line from the holding tank in order to prevent any materials from entering the tank via the discharge line.
- o The location of one of the automatic drain valves will be moved from MW-15 to MW-25. This will allow draining of the system per the final site contours.

Each of these items represents a minor modification to the dewatering system to enhance its overall performance.

If you have any questions on this matter please call me.

Very truly yours,

Handwritten signature of Joseph E. Mihm in cursive script, followed by a small handwritten number '623'.

Joseph E. Mihm, P.E.
Project Manager

JEM:bob

100587

CanonieEnvironmental

Canonie Environmental

July 20, 1992

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Modification Request 35
Infiltration Barrier Seam Destructive Testing
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) requests the acceptance of the destructive testing results for the infiltration barrier seam as full compliance with the Technical Specifications, Section 02210, Part 3.11 and Section 2.3.2.3 of the QAPP. The required testing was performed on all sections of the infiltration barrier. The modification concerns the test frequency of one shear test and one peel test for the last 1,000 feet, or fraction thereof, of field seam installed by each welding machine in a small area in the southwest corner of the site.

Two separate welding machines, or mice, were used to produce a total of approximately 18,700 feet of seam while assembling the HDPE panels. As each mouse finished 1,000 feet of seam, a sample of the finished seam was taken for analysis by an independent testing laboratory and for field testing. Approximately 17,000 feet of seam were tested in this manner. The final approximate 1,700 feet of seam was made without either of the two mice exceeding the 1,000 foot criteria individually. Canonie's field personnel discussed this situation with Langan's field representatives, and it was agreed that additional testing would not be required because the 1,000 foot criteria had not been exceeded.

Seventeen samples were tested, and the results from the laboratory and field tests show that the seams are all in compliance. The Destructive Test Log is attached to this letter. The test results show the following:

Dr. Donald J. Murphy, P.E.

2

July 20, 1992

- o All 17 samples tested in the field and at the independent laboratory passed the peel test.
- o All 17 samples tested in the field and at the independent laboratory passed the shear test.
- o The peel test result is acceptable if there is film tearing of the parent sheet before the seam fails.
- o The shear strength of the sample must be greater than 90% of the shear strength of the parent sheet which was 120 pounds per inch (ppi). The shear values for each seam ranged from 132 to 179 ppi or 122 to 165 % above the specification.

Testing was performed to ensure there was no possibility of excess crystallinity, contamination, offset welds, or any other cause of imperfect welding. Because all seventeen samples passed their respective tests 100% of the time and since the crews and equipment which produced these results performed all the seaming work on-site, Canonie requests an acceptance of these results as satisfying the requirements of Section 02210, Part 3.11.A, of the Technical Specifications.

If you should have any questions, please contact me at (215)-337-2551.

Very truly yours,

Joseph E. Mihm /SDP

Joseph E. Mihm, P.E.
Project Manager

Attachment

JEM/sdp

100589

CanonieEnvironmental

DESTRUCTIVE TEST LOG

PAGE 1 OF 1

PROJECT NAME: SCP - CAA START

PROJECT NUMBER:

MATERIAL DESCRIPTION: 60 mil HDPE

DATE	SAMPLE ID	SEAM NO	MACH NO	OPER INITIALS	PEEL VALUES LBS / INCH / SHEAR			PASS / FAIL	DATE TO LAB PKG SLIP NO	LAB PASS / FAIL	LOCATION / COMMENTS / Roll
-29-92	DS # 1	4AB/5	1533	4-21-92 TK	101/113	95/106	159	P	4-29-92	P	Near row-35 1912
"	2	10/11	"	4-28-92 TK	130/132	102/128	156	P	"	P	45' N Piece 1915
"	3	11/12B	1622	4-21-92 JR	117/133	-	168	P	"	P	1215/105
"	4	16/17	1533	4-28-92 TK	118/115	-	167	P	"	P	45' SE Piece 2003
-4-92	DS # 5	20/21	"	4-30-92 TK	120/127	-	159	P	5-4-92	P	1904
"	6	23/24	"	4-30-92 JR	117/121	-	149	P	"	P	1914
"	7	29/30	"	5-1-92 TK	126/137	-	159	P	"	P	1920
"	8	33/34AB	"	5-1-92 TK	124/117	-	156	P	"	P	95' before end of seam @ 34A 1917
-5-92	DS # 9	37/38	1622	5-5-92 JR	141/127	-	173	P	5-7-92	P	8' before end of seam 2004/2001
-7-92	DS # 10	40/41AB	1533	5-5-92 TK	116/127	-	179	P	"	P	after 26' of seam 2001
"	11	43/44	1622	5-5-92 JR	132/156	-	178	P	"	P	7' from end of seam 1902
"	12	45/46	1533	5-6-92 TK	117/117	-	177	P	"	P	after 26' of seam 1903/1911
"	13	48/49A	"	5-6-92 TK	114/105	-	154	P	"	P	after 75' of seam 1911/1911
5-12-92	DS # 14	53/54	"	5-11-92 TK	114/124	-	135	P	5-12-92	P	53' from end of seam 1913
"	15	58/59	1622	5-11-92 JR	109/104	-	137	P	"	P	after 81' of seam 2002
"	16	63/64	1533	5-11-92 TK	101/123	-	132	P	"	P	62' from end of seam 1909
"	17	67/69A	"	5-12-92 TK	115/101	-	144	P	"	P	3' from end of seam 1909/1906

EPA MODIFICATION APPROVALS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

IRL
100592

SEP 27 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No.1, No.2 and No.3 of the Interim Remedy
Remedial Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

I understand Mr. Pat Evangelista of my staff already provided you oral approval of the modifications described in your September 6 and September 18, 1991 requests for modification of the IRRDR. In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby formally approves such modifications.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

SEP 25 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No.4 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby approves the modifications described in your September 24, 1991 request for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso", is written above the typed name.

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



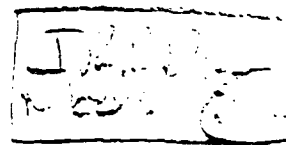
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

A-84



OCT 09 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No.5 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your October 8, 1991
request for modification of the IRRDR.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

OCT 11 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No.6 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby approves the modification described in your October 10, 1991 request for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script that reads "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

OCT 13 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 7 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby approves the modification described in your October 18, 1991 request for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso", is written over the typed name.

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

A-87



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

OCT 30 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 8 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modification described in your October 28, 1991
request for modification of the IRRDR.

Sincerely yours,

Raymond Basso
Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Large, NJDEPE



A-88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

~~MAILED~~
~~FAX MAIL~~
~~COPIES~~
~~To:~~
~~JOHN HALL~~
~~BILL WALKER~~

NOV 27 1991

THOMAS
1-10-91

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 9 and No. 11 of the Interim Remedy
Remedial Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your November 13
(Modification No. 9) and November 14, 1991 (Modification No. 11)
requests for modification of the IRRDR.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

A-89

DEC 21 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 12, Well and Piezometer Raising/Repair, of
the Interim Remedy Remedial Design Report (IRRDR) and Wells
#1 and #6 at the Scientific Chemical Processing Site in
Carlstadt, New Jersey.

Dear Dr. Murphy:

On December 16, 1991 the U.S. Environmental Protection Agency (EPA) issued you approval of Modification No. 12 as described in your November 22, 1991 request for modification of the IRRDR. Furthermore, as we discussed and agreed on December 19, 1991, any such repair, modification and/or replacement of piezometers and wells must be performed, in accordance with New Jersey State regulation, by a New Jersey licensed well driller.

Based on the EPA's and the New Jersey Department of Environmental Protection and Energy's (NJDEPE) December 17, 1991 visual inspection and discussions regarding the condition of the two damaged wells (#1 and #6), EPA and NJDEPE have determined that the integrity of wells #1 and #6 is compromised and would remain questionable upon completion of any repair to the wells. These wells are visibly physically damaged and it cannot be determined if any subsurface damage to the sandpacks has occurred. The integrity of these wells is critical to the success of the interim remedy. EPA and NJDEPE, therefore, require that these wells be properly abandoned and replaced in accordance with New Jersey State regulation.

If you have any questions please feel free to call Mr. Pat Evangelista of my staff at (212)264-6311.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

100599



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

A-90

NOV 25 1991

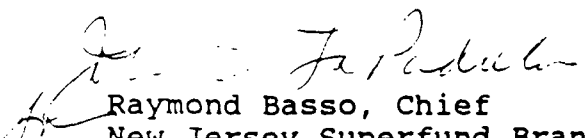
Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 13 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modification described in your November 22, 1991
request for modification of the IRRDR.

Sincerely yours,


Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

A

DEC 09 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 14 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modification described in your November 27, 1991
request for modification of the IRRDR.

Sincerely yours,

Raymond Basso
Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

FEB 20 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Revisions of Modifications No. 12 and 18 of the Interim
Remedy Remedial Design Report (IRRDR) for the Scientific
Chemical Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

I understand Mr. Pat Evangelista of my staff already provided you oral approval of the request for revision of modifications described in your January 14, 1992 request for modification of the IRRDR. In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby formally approves such modifications.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

DEC 16 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 10, 12, 15 and 16 of the Interim Remedy
Remedial Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your November 14,
November 22, December 2 and December 10, 1991 requests for
modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

A-94

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

DEC 30 1991

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 17 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modification described in your December 10, 1991
request (as revised by your December 23, 1991 memo to Mr. Pat
Evangelista) for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

100604



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

A-8

100 10 1002

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 18 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby approves the modification described in your December 23, 1991 request (as approved by the Land Use Regulation Element of the New Jersey Department of Environmental Protection and Energy on January 6, 1992) for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script that reads "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

A-96

REGION II

JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

JAN 14 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 19 and 20 of the Interim Remedy Remedial
Design Report (IRRDR) for the Scientific Chemical Processing
Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your January 13, 1992
request for modification of the IRRDR.

Sincerely yours,

A handwritten signature in cursive script that reads "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

100606



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

FEB 18 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 21 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

I understand Mr. Pat Evangelista of my staff already provided you oral approval of the modification described in your January 23, 1992 request for modification of the IRRDR. In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby formally approves such modification.

Sincerely yours,

Pat Evangelista
Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

FEB 12 1992

Mr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 22 of the Interim Remedy Remedial
Design Report (IRRDR) for the Scientific Chemical Processing
(SCP) Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

This is in response to your February 5, 1992 correspondence in which you request, on behalf of Canonie Environmental Services Corp., approval to temporarily halt construction activities at the SCP-Carlstadt Site until weather conditions improve. The criteria Canonie proposes to be used in selecting a date to recommence work requires both sufficient temperatures to enhance drying and a weekly forecast with no more than one day of rain. Based on Canonie's present 90-day forecast for the area, Canonie tentatively anticipates that such criteria will not be satisfied before mid-April 1992.

As a result of Canonie's preliminary indications to seek temporary demobilization at the February 3, 1992, on-site meeting and in attempts to formally respond to your February 5, 1992 letter, the U.S. Environmental Protection Agency (EPA) requested it's oversight contractor, ICF Technology, Inc., to provide a professional opinion regarding the ability to grade the site under the current conditions for installation of the infiltration barrier as required by the IRRDR.

A site visit was conducted by ICF on February 6, 1992, to observe the conditions as they relate to final grading of the Site. The weather was sunny with high temperature in the upper 30's or low 40's. The wind was steady between 10 and 15 mph and the relative humidity appeared to be moderate.

Using a hand shovel, soil samples were taken by ICF personnel at several remote locations to determine the presence of frost or ice and to estimate the moisture in the samples. No frost or ice was detected in the samples. The samples were typically granular, silty and moist beneath the upper 1 inch dry crust.

Furthermore, as you are aware and as ICF has informed EPA, at approximately 2 o'clock in the afternoon on February 6, Canonie offered to perform a demonstration of the grading problems it was encountering. A 180 HP Komatsu D-68P Tractor/Crawler was driven to a location Canonie claimed to be especially difficult to grade due to wet conditions. The 19 ton tractor had no difficulty in moving along the Site. The tracks did not sink into the soil nor was there any soil or mud remaining attached to the tracks. In addition, there was no noticeable swelling of the ground surface adjacent to the tractor which, if there was swelling, could be attributed to displacement of saturated soils. The Komatsu performed several passes with the blade, skimming the ground surface to a depth of about 6-12 inches. The underlying condition of the soil was moist but loose. A deeper cut to a depth of about 3 feet was made and the soil conditions were the same. There were several clumps of soil which surfaced during the trial run, but they readily broke apart as they were worked by the tractor blade. In addition, the tractor operator also commented to ICF that he did not observe any icy or frozen conditions during the grading demonstration.

Based on the observations made during the February 6 site visit, including Canonie's grading demonstration, it is ICF's professional opinion that final grading, in accordance with the IRRDR specifications, could and should commence immediately.

On February 6, 1992, you also informed Mr. Pat Evangelista, of my staff, based on feedback you received from your field oversight personnel including your viewing a videotape of the above-described trial run, of your opinion that Canonie's grading demonstration on an approximate 4,000 square foot area of the Site was sufficiently successful for purposes of preparing the Site surface for installation of the infiltration barrier.

Based on the above-described information, EPA has difficulty understanding why Canonie has taken it upon itself, without authorization from you or EPA, to cease all grading activities and begin temporary demobilization. There has been ample opportunity in the recent past for final site grading to have been performed consistent with the successful grading demonstration of February 6, 1992. Clearly, no best efforts have been used to avoid or minimize any delay or prevention of performance of such work.

Therefore, in accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, EPA hereby disapproves the modification described in your February 5, 1992 request for modification of the IRRDR. EPA requires that implementation of the interim remedy, including final site grading, continue expeditiously to completion.

If you have any questions regarding this matter please contact Mr. Evangelista at (212) 264-6311.

Sincerely yours,

A handwritten signature in cursive script that reads "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 24 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing
Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency (EPA) hereby approves the modification described in your March 11, 1992 request for modification of the IRRDR. In conjunction with this approval, EPA also hereby reminds you and Canonie Environmental that dewatering activities are to commence and be performed in accordance with all relevant requirements of the IRRDR.

If you have any questions regarding this matter please contact Mr. Pat Evangelista of my staff at (212) 264-6311.

Sincerely yours,

A handwritten signature in cursive script, reading "Raymond Basso", is written above the typed name.

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

A-102

APR 27 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 25, 26 and 27 of the Interim Remedy
Remedial Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

I understand Mr. Pat Evangelista of my staff already provided you, through EPA's oversight contractor (ICF Technology Inc.), oral approval of your April 9 and April 13, 1992, written requests for modification of the IRRDR. In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency hereby formally approves such modifications.

Sincerely yours,

Raymond Basso
Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

IRRDR
MCCS

A-103



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

MAY 18 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 28 and 29 of the Interim Remedy
Remedial Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

On May 13, 1992, Mr. Pat Evangelista of my staff provided you oral approval of the modifications described in your May 1, 1992 requests for modification of the IRRDR. In accordance with Paragraph 166 of Administrative Order No. II-CERCLA-00116, the U.S. Environmental Protection Agency (EPA) hereby formally approves such modifications.

As per Mr. Evangelista's May 13, 1992, discussion with you, EPA requires that you submit any revised IRRDR construction drawings resulting from EPA's approval of modifications 28 and 29. Such revised drawings should be received by EPA on May 26, 1992.

If you have any questions regarding this matter please contact Mr. Evangelista at (212) 264-6311.

Sincerely yours,

A handwritten signature in cursive script that reads "Raymond Basso".

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

IRRDR
meas

A-104



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

JUN 08 1992

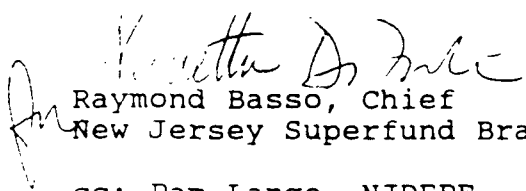
Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 32 and 33 of the Interim Remedy Remedial
Design Report (IRRDR) for the Scientific Chemical
Processing Site in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your June 3, 1992 request
for modification of the IRRDR.

Sincerely yours,


Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

A-105

JUL 01 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modifications No. 34 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modifications described in your June 24, 1992
request for modification of the IRRDR.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10078

AUG 17 1992

Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407

Re: Modification No. 35 of the Interim Remedy Remedial Design
Report (IRRDR) for the Scientific Chemical Processing Site
in Carlstadt, New Jersey.

Dear Dr. Murphy:

In accordance with Paragraph 166 of Administrative Order No. II-
CERCLA-00116, the U.S. Environmental Protection Agency hereby
approves the modification described in your July 27, 1992 request
for modification of the IRRDR.

Sincerely yours,

Raymond Basso, Chief
New Jersey Superfund Branch II

cc: Pam Lange, NJDEPE

FAX TO
JE MIHM

COPIES

- WLL (MAM)

- CHC

- FILE

INTERIM REMED

RD-REPORT -

MODIFICATIONS

ADVISORY NOTES

Canonie Environmental

A-108

January 15, 1992

Canonie Environmental Services Corp.
500 North Guilford Road - Third Floor
Princeton, Pennsylvania 19406

Phone: (215) 337-2551
Fax: (215) 337-2560

90-198

Dr. Donald J. Murphy, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Advisory Note Concerning Modification Number 18
Deflected Sheet Pile Restoration
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) has undertaken the driving of the H-piles along the sheet pile sections between sheets 155 to 170 and 181 to 191 in accordance with Modification Number 18, dated December 20, 1991. During planning for driving of the H-piles along the section from sheets 155 to 170, it was realized that the gabion basket which is present between sheets 157 to 159 will interfere with pile driving activities, therefore the H-pile spacing proposed in Modification Number 18 is unobtainable. As a result, Canonie is planning to drive H-piles at the spacing indicated on the attached drawing, which will result in the driving of seven instead of six H-piles along this section. This pile spacing will result in loads being applied to the H-piles which are either equal to or less than those which would have been applied utilizing the pile spacing originally proposed.

If you have any further question, please contact me at (215) 337-2551.

Sincerely yours,

Joseph E. Mihm IFSG

Joseph E. Mihm, P.E.
Project Manager

JEM/fg

Attachment

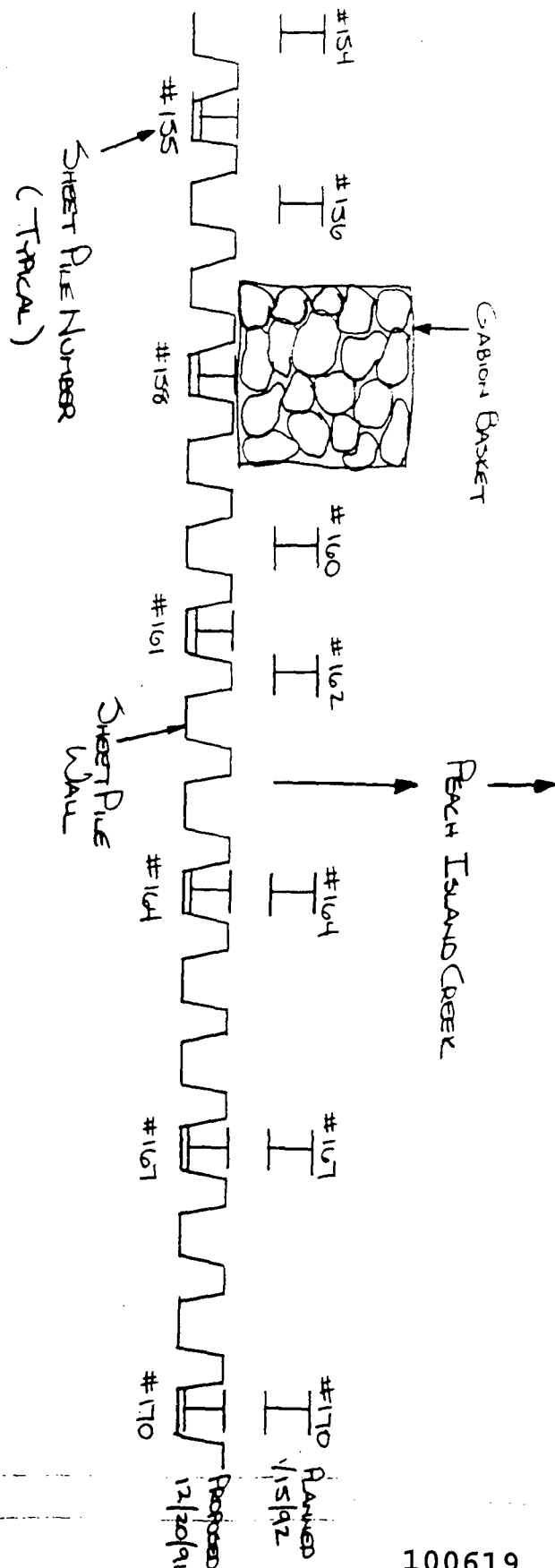
cc: Curt DeWolf - Canonie
Frank Gontowski - Canonie
Peter F. Porter - Canonie
James Semple

100618

By FIG Date 1/15/92 Subject SCP CARLSTADT Sheet No. 1 of 1

Chkd. By Date H-PILE LOCATION DWG. Proj. No. 90-198

1/4" X 1/4"



Canonie Environmental

Canonie Environmental
100 North Glen Road Third Floor
King of Prussia, Pennsylvania 19406

April 3, 1992

Phone: 215-337-2881
Fax: 215-337-1160

90-198

Donald J. Murphy, Ph.D., PE
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

Advisory Note Concerning Modification Number 12
SCP Carlstadt Site

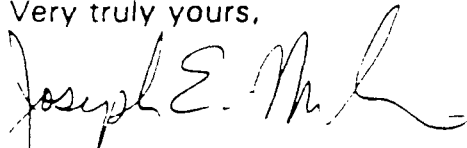
Dear Dr. Murphy:

This letter is being submitted by Canonie Environmental Services Corp. (Canonie) to record the repairs that are to be performed on piezometer P-5. Canonie, Langan Environmental Services, Inc. (Langan), and ICI Kaiser field personnel met in the field and inspected the condition of piezometer P-5 and agreed that the damage to the well casing (slight buckle in casing approximately one foot above the ground surface) could be repaired without impacting the integrity or performance of the piezometer.

Canonie will proceed with repair of piezometer P-5 in accordance with the procedures outlined in the approved Modification Number 12. This work will be performed once the site conditions improve to point where equipment can move across the site without destroying the final grading work. The piezometer repair will be done under the direction of a licensed New Jersey well driller.

Canonie will provide Langan and ICI Kaiser at least one days notice prior to initiating these work activities.

Very truly yours,


Joseph E. Mihm
Project Manager

JEM\jc

100620



Canonie Environmental

A-111

May 11, 1992

90-198

Donald J. Murphy, Ph.D, P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

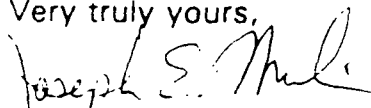
Advisory Notice
Barbed Wire Strand Spacing
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

Canonie Environmental Services Corp. (Canonie) submits this letter to clarify the method of installation of the barbed wire on the perimeter fence at the Scientific Chemical Processing (SCP) Carlstadt Superfund Site. The combined length of the three-barbed wire strands will have a dimension of approximately 1 foot. Additionally, the three-barbed wire strands will be placed at approximately 45 degrees to the vertical alignment of the fencing as indicated in the Modification Number 17. Therefore, the top barbed wire strand will be positioned approximately 8 1/2 inches vertically above the top rail of the fence.

If you have any questions, please contact me at (215) 337-2551.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM/rm

100621

Canonie Environmental

July 23, 1992

Canonie Environmental Services Corp.
500 North Guip Road - Third Floor
King of Prussia, Pennsylvania 19406

Phone: 215-337-2551
Fax: 215-337-0560

90-198

Donald J. Murphy, Ph.D., P.E.
President
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, NJ 07407

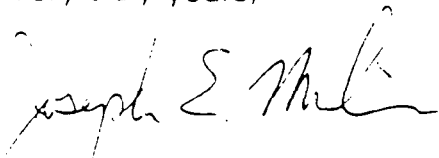
Advisory Note on the Pressure
Test of the One-Inch Carrier Lines
SCP Carlstadt Superfund Site

Dear Dr. Murphy:

This advisory notice is to advise you that a pressurized air test of the one-inch carrier line within the double containment piping was performed at the SCP Carlstadt Superfund Site. Some confusion as to the type of test to be performed occurred due to the difference in test procedures described in the Quality Assurance Project Plan (QAPP), Section 2.4, and the Technical Specifications, Section 15100, Part 3.6.C. The QAPP describes using municipal water for the test while the Technical Specifications describe the test using only compressed air. Compressed air is the appropriate method for testing this piping.

Please call if there are any questions.

Very truly yours,



Joseph E. Mihm, P.E.
Project Manager

JEM/slz

Canonie Environmental
100 North Clinton Road - Third Floor
King of Prussia, Pennsylvania 19406

July 13, 1992

Phone 215 337 7661
Fax 215 337 1860

90-198

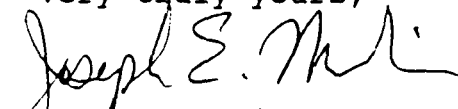
Dr. Donald J. Murphy, P.E.
Langan Environmental Services, Inc.
River Drive Center 2
Elmwood Park, New Jersey 07407:

Addendum To Operations & Maintenance Plan
Interim Remedy Remedial Design Report (IRRDR)
216 Paterson Plank Road NPL Site

Dear Dr. Murphy:

As you requested, Canonie Environmental Services Corp. (Canonie) has prepared the referenced Addendum in accordance with the USEPA's letter of 7 July, 1992 to you. A copy is enclosed. Please forward it to the USEPA as soon as possible.

Very truly yours,


Joseph E. Mihm, P.E.
Project Manager

JEM:bob
Enclosure

**ADDENDUM
TO
OPERATIONS & MAINTENANCE PLAN
INTERIM REMEDY REMEDIAL DESIGN REPORT
216 PATERSON PLANK ROAD NPL SITE**

This Addendum, dated 14 July 1992, serves to modify the original Operations & Maintenance Plan as follows:

1. Page 18, Section 5.3.1, Decontamination of Sample Equipment

Modification 1: Steps 7 and 8 of the decontamination procedure are reversed.

Modification 2: Polyethylene tubing used with submersible or centrifugal pumps shall be cleaned before use as described for water level indicators in the last paragraph on page 18 and discarded after use.

2. Pages 21-23, Section 5.3.3.3, Sampling Procedures.

Modification 3: Step 4 - Field parameters (i.e. pH, temperature and conductivity) are to be measured after water level measurements are taken and after each purged well volume. Sampling should not begin until at least 3 well volumes are purged and the last two sets of measurements agree within 10%. Field instruments should be calibrated and/or the calibration should be checked at least daily. Low-yield wells may be evacuated to near dryness once and allowed to recover sufficiently for samples to be taken. A well must be sampled within three hours of evacuation.

Modification 4: Step 6 - Polypropylene monofilament line is acceptable. Polypropylene rope should not be used as complete cleaning before and between use is difficult to achieve.

Modification 5: Step 7 - Samples for volatile organic analysis (VOA) should be taken from the first bail-full of water.

Modification 6: Step 7 - Each metals and cyanide sample must be checked for pH (metals < 2, cyanide > 12). Check pH on an aliquot, do not place pH probe in the sample bottles.

3. Page 24, Section 5.3.4.3, Sampling Procedures.

Modification 7: Step 3 - If samples for volatile organic analysis are to be acidified, the following procedures must be followed for both surface water and ground water VOA sampling:

Using an extra VOA vial, collect an aliquot (in the case of wells, from the last of the purge water). Add 1:1 hydrochloric acid, drop by drop, until pH < 2 is achieved. Discard this vial. Add the same number of acid drops to the actual sample vials. Fill the vials completely with the sample water (for groundwater, from the first bailer). If bubbles are detected, DO NOT top off

the vials, as reopening the vials will cause loss of volatiles. Prepare new vials and fill them.

Modification 8: Step 3 - pH for metals and cyanide surface water samples should be measured as described above for ground water samples.

4. Page 28, Section 5.3.4, Quality Assurance/Quality Control Samples.

Modification 9: Trip blanks should be prepared daily in the field from the same analyte-free water used to collect the field blanks.

Modification 10: Field blanks should be collected at a frequency of one per decontamination event, not to exceed one per day for each type of equipment used.

5. Page 29, Section 5.4, Results Reporting.

Modification 11: The following most recent Contract Laboratory Program (CLP) Statement of Works (SOW) should be used for analysis: (1) Organics Analysis - OLM01.8 and (2) Inorganics Analysis - ILM02.1. Based on Mr. Evangelista's discussion with you, EPA is aware that your laboratory will be following ILM01.1 for inorganics analysis.

Modification 12: CLP deliverables must be prepared by your laboratory and the data must be validated according to the following most recent EPA-Region II data validation Standard Operating Procedures (SOP): (1) Organics - SOP HW-6, Revision 8, January 1992 and (2) Inorganics - SOP HW-2, Revision 11, January 1992.

APPENDIX B

QUALITY ASSURANCE/QUALITY CONTROL REPORTS

100627

MEMO

To: Joe Mihm

90-198

From: Pete Porter

October 3, 1991

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
SEPTEMBER 1991
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between September 1, 1992 and September 30, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey.

2.0 - Work Completed

The following items were completed during the month of September:

- o Mobilization and construction of temporary facilities;
- o Preparation of the site and installation of erosion controls;

All materials and installation methods met or exceeded the requirements in the Technical Specifications and the QAPP for each of the completed work items.

3.0 - Work Scheduled for October 1991

The following work items are scheduled for the month of October:

- o Begin installation of the sheet pile wall;

100628

CanonieEnvironmental

- o Prepare mixing areas for use during slurry wall construction.

4.0 - Other QA/QC Activity

No additional QA/QC activity was performed during the month of September beyond assuring the materials and installation procedures met the requirements found in the Technical Specifications and the QAPP.

SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Jim Semple - Canonie

100629

CanonieEnvironmental

MEMO

To: Joseph Mihm

90-198

From: Peter Porter

November 3, 1991

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
OCTOBER 1991
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the quality assurance/quality control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period from October 1, 1991 through October 31, 1991 at the SCP Carlstadt Superfund Site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for November 1991;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - QA/QC Concerns;
- o Section 6.0 - Recommended Solutions to QA/QC Concerns;
- o Section 7.0 - Status of Solutions to QA/QC Concerns.

2.0 - Work Completed

During the period from October 1, 1991 through October 31, 1991, Canonie

Joseph Mihm

2

November 3, 1991

completed the work as outlined in the following sections:

- o Section 2.1 - Piezometer Closures;
- o Section 2.2 - Installation of sheet piling;
- o Section 2.3 - Backfill sheet pile wall;
- o Section 2.4 - Excavation and backfill of slurry wall;
- o Section 2.5 - Site grading;
- o Section 2.6 - Drainage swale excavation.

2.1 - Piezometer Closures

No specific QA/QC testing was required for this activity. In a field memo dated September 10, 1991 to Mark Seel of Langan Environmental Services Inc., Canonie confirmed that Piezometers P-1, P-7, P-12, and P-13 will be abandoned due to probable damage by slurry wall construction. All other piezometers will remain in place. The piezometers were abandoned on September 11, 1991 in accordance with the Technical Specifications. The required well abandonment forms are being processed by the New Jersey Department of Environmental Protection and Energy (NJDEPE) and the Environmental Protection Agency (EPA).

2.2 - Installation of Sheet Piling

Sheet pile installation required construction review as outlined in the Quality Assurance Protection Plan (QAPP) and the Technical Specifications. According to the

CanonieEnvironmental

Joseph Mihm

3

November 3, 1991

Technical Specifications, the maximum variation from vertical plumb shall be 1/4 inch per foot and the top elevation of the piles shall be within two inches of elevation 3.5 feet. See Table 1 and Table 2 for Sheetpile QA/QC Data. Canonie incurred problems with large debris and rubble all along the alignment of the sheet pile wall and implemented probing for obstructions and removal of any obstructions found within the alignment. This activity proved to be successful. All sheet piles not meeting the Technical Specifications tolerances were adjusted accordingly, with the exception of those sheets located within the boundaries of the "oily fluid" area. All sheet pile adjustments were performed prior to backfilling the sheet pile wall and slurry wall construction. Problems encountered during the sheet pile installation, within the boundaries of the oily fluid area, were corrected and met the Specifications as outlined in Section 5.0. Canonie completed driving the sheet piles within the oily fluid area on October 18, 1991. It also appeared that the removal of obstructions found within the alignment may have weakened subgrade conditions which support the sheet piles. This problem was observed during backfilling the sheet piles and is described in Section 5.0. The overflow notches were installed in accordance with the Construction Drawings.

2.3 - Backfill of Sheet Pile Wall

No specific QA/QC testing was required for this activity. However, the backfilling operation required 18" maximum loose lifts compacted with two passes of a walk-behind compactor. This operation was visually reviewed by Canonie personnel to ensure that work was performed in accordance with the Technical Specifications and Construction Drawings.

2.4 - Excavation and Backfill of Slurry Wall

Excavation and backfill of the slurry wall required specific QA/QC testing and

Joseph Mihm

4

November 3, 1991

inspection. The slurry mixture required testing once per 10 hour work shift for in-pond and in-trench slurry to ensure quality. See Table 3 for slurry mixture test results. The slurry wall excavation was sounded every 2-1/2 feet to ensure that the trench was keyed into the proper layer. See Table 4 for slurry wall depths. Bottom-of-trench soil samples were taken every ten feet and were preserved for 48 hours to verify the bottom of the slurry wall was keyed properly. The backfill material required one slump test per each 500 cubic yards mixed and one permeability sample of in-trench backfill for every 200 linear feet of slurry wall constructed. See Table 5 for permeability results. All QA/QC tests and inspections not in accordance with the Technical Specifications and Construction Drawings have been recorded and corrected to meet the project requirements.

Excavation of the slurry wall along Peach Island Creek caused a deflection in the sheet pile wall from approximately station 4 + 15 to station 4 + 38 (sheet #181 to #191). Operations in this area were suspended by the EPA on Tuesday, October 29, 1991 pending verification of the sheet pile wall stability by Canonie. Supporting calculations and documentation were provided by Canonie to Langan in the October 31, 1991 letter from Joseph Mihm to Donald Murphy.

2.5 - Site Grading

No specific QA/QC testing was required for this activity. Canonie initiated site grading with the trench spoils in accordance with the Technical Specifications and Construction Drawings.

2.6 - Excavation of Drainage Swales

No specific QA/QC testing was required for this activity. However, Canonie set grade stakes in accordance with the Soil Erosion and Sediment Control Plan drainage slopes

Joseph Mihm

5

November 3, 1991

for the drainage swale excavation from station 1 + 50 to station 7 + 50 of the slurry wall alignment. Canonie representatives visually reviewed this activity to ensure that it meets the Technical Specifications and Construction Drawings.

3.0 - Work Scheduled for November 1991

The work items scheduled for the month of November 1991 include the following:

- o Continuation of excavation and backfill of slurry wall;
- o Continuation of site grading;
- o Installation of vertical slurry wall liner;
- o Construction of slurry wall cap;
- o Initiation of drainage swale excavation;
- o Initiation of infiltration barrier placement.

4.0 - Changes to Project Schedule

At this time, the project is behind schedule by approximately two weeks. However, various work items have been overlapped in order to complete the project by December 20, 1991. Figure 1 shows the updated progress schedule (revision 6).

5.0 - QA/QC Concerns

A QA/QC concern was encountered throughout the first 90 lineal feet of the sheet pile

Joseph Mihm

6

November 3, 1991

driving along the southern edge of Peach Island Creek. Subsurface debris/obstructions impeded the driving of the sheet piles. The debris has also caused miscellaneous sheets to be driven out of plumb. Canonie implemented a procedure utilizing the bucket of the 225 excavator to excavate behind the sheet pile wall to remove the obstructions and encountered an oily fluid from approximately station 0 + 20 to station 1 + 15. On October 2, 1991, the EPA suspended all operations in this area. On October 9, 1991, the EPA gave Canonie verbal approval to drive the return line in the vicinity of the oily fluid area. On October 15, 1991, the EPA gave Canonie verbal approval to complete driving of the sheet pile wall within the oily fluid area (Sta. 0 + 20 to 1 + 15) in accordance with the following directives:

- o Sheets are to be driven to final grade or refusal, whichever comes first;
- o The sheets are not to be lifted to prevent no oily fluid from escaping beneath the sheets;
- o Plumbness and alignment tolerances will be secondary to the first two steps.

The EPA directives have restricted Canonie from driving all the sheeting within the oily fluid area according to the Technical Specifications and QAPP. Sheetpile QA/QC problems encountered in the oily fluid area include:

- o Three sheets meeting refusal and being underdriven by approximately 1.98, 0.16, and 0.67 feet;
- o Twelve sheets being overdriven by up to approximately 0.11 feet;

100635

CanonieEnvironmental

Joseph Mihm

7

November 3, 1991

- o Numerous sheets being driven out of plumb by up to approximately 3.1 inch/foot;
- o Numerous sheets being driven out of alignment by up to approximately 1.5 feet.

The following QA/QC concerns were encountered while working next to the sheet pile wall:

- o Backfilling the sheet pile wall caused an approximately 35 foot section of sheet pile wall to be deflected outward by approximately 24 inches from approximately station 3 + 55 to station 3 + 90 (Sheets #155 to #170);
- o Excavating the slurry wall next to the sheet pile wall caused an approximately 25 foot section of the sheet pile wall deflected outward by approximately 24 inches from approximately station 4 + 15 to station 4 + 38 (Sheets #181 to #191).

See Section 6.0 for the recommended solutions for the sheet pile wall.

6.0 - Recommended Solutions QA/QC Concerns

Canonie has been unable to correct the sheets that do not meet the Technical Specifications and QAPP within the boundaries of the oily fluid area due to the EPA work stoppage in this area. Canonie is currently evaluating alternatives to support the area of the sheet pile wall that has deflected. To assure that additional deflections do not occur, Canonie has implemented the following steps:

100636

CanonieEnvironmental

Joseph Mihm

8

November 3, 1991

- o Immediately stopping any stockpiling of backfill materials near the sheet pile wall or on the bench area;
- o Cutting the slurry wall working bench to elevation 3.5 feet;
- o Utilize the CAT 225 instead of the CAT 235 to excavate the slurry wall in this area.

To restore the deflected sheet piles, Canonie recommends removing a portion of the backfill and then using the backhoe bucket to apply pressure to push the top of the sheet piles back into place. Crushed stone or riprap would be installed along the creek side to fill any voids and provide additional support to the sheet pile.

7.0 - Status of Solutions to QA/QC Concerns

Due to the EPA directives, Canonie is unable to correct the sheets that do not meet the Technical Specifications and QAPP within the boundaries of the oily fluid area.

Canonie is currently reviewing the sheet pile calculations and alternative methods to support the area of the sheet pile wall that has deflected.

PFP/jc

Attachments

cc: Mark Seel, Langan
Curt DeWolf, Canonie
Frank Gontowski, Canonie
Jim Semple, Canonie

100637

CanonieEnvironmental

TABLE 1

SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT
190	3/16 IN/FT		221	1/8 IN/FT	3/16 IN/FT	252	1/8 IN/FT
191	1/16 "		222	0 "		253	1/8 "
192	1/16 "		223	1/16 "		254	1/8 "
193	1/16 "		224	1/8 "		255	1/8 "
194	0 "		225	1/8 "		256	1/16 "
195	0 "		226	0 "		257	1/8 "
196	1/8 "		227	1/8 "		258	1/8 "
197	1/8 "		228	1/8 "		259	1/8 "
198	1/16 "		229	1/16 "			
199	0 "		230	1/8 "			
200	0 "		231	0 "			
201	0 "		232	1/16 "			
202	0 "		233	1/16 "			
203	0 "		234	1/8 "			
204	0 "		235	0 "			
205	1/8 "		236	5/8 "	1/8 "		
206	1/16 "		237	5/8 "	0 "		
207	1/8 "		238	1/8 "			
208	0 "		239	1/8 "			
209	1/16 "		240	1/8 "			
210	1/16 "		241	0 "			
211	0 "		242	0 "			
212	1/16 "		243	0 "			
213	3/8 "	1/8 IN/FT	244	1/16 "			
214	3/8 "	1/8 "	245	1/8 "			
215	3/16 "		246	3/16 "			
216	0 "		247	5/8 "	1/8 "		
217	0 "		248	0 "			
218	1/16 "		249	5/8 "	1/4 "		
219	1/8 "		250	1/2 "	1/8 "		
220	1/16 "		251	5/8 "			

TABLE 1

SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.
97	1/8 IN/FT		128	0 IN/FT		159	0 IN/FT	
98	3/16 "		129	0 "		160	3/16 "	
99	3/16 "		130	1/8 "		161	1/8 "	
100	0 "		131	1/16 "		162	0 "	
101	1/8 "		132	1/8 "		163	0 "	
102	0 "		133	0 "		164	0 "	
103	1/8 "		134	0 "		165	0 "	
104	3/16 "		135	1/8 "		166	1/8 "	
105	1/8 "		136	1/16 "		167	1/16 "	
106	3/16 "		137	0 "		168	1/8 "	
107	1/8 "		138	0 "		169	0 "	
108	3/16 "		139	1/8 "		170	3/16 "	
109	3/8 :	0 IN/FT	140	1/16 "		171	0 "	
110	0 "		141	1/16 "		172	1/8 "	
111	1/16 "		142	3/16 "		173	1/8 "	
112	0 "		143	0 "		174	1/8 "	
113	1/8 "		144	0 "		175	3/16 "	
114	1/16 "		145	3/16 "		176	1/8 "	
115	0 "		146	1/16 "		177	3/16 "	
116	1/16 "		147	1/16 "		178	0 "	
117	0 "		148	1/8 "		179	0 "	
118	0 "		149	1/16 "		180	1/8 "	
119	0 "		150	0 "		181	0 "	
120	1/16 "		151	1/8 "		182	0 "	
121	1/16 "		152	1/8 "		183	1/16 "	
122	0 "		153	0 "		184	0 "	
123	0 "		154	0 "		185	0 "	
124	0 "		155	0 "		186	0 "	
125	0 "		156	0 "		187	0 "	
126	1/8 "		157	1/16 "		188	1/8 "	
127	0 "		158	1/8 "		189	0 "	

TABLE 1

WON HOLD PER E.P.A.

SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.	SHEET NO.	PLUMB MEASUREMENT	ADJUSTED PLUMB MEAS.
1	IN/ET		33*			65	3/16 IN/ET	
2	1/8 "		34*			66	1/8 "	
3	0 "		35*			67	1/16 "	
4	3/16 "		36*			68	1/16 "	
5	1/8 "		37*			69	1/8 "	
6	1/16 " Corner		38*			70	3/8 "	
7	1/16 "		39*			71	3/8 "	
8*			40*			72	1/8 "	
9*			41*			73	1/8 "	
10*			42*			74	0 "	
11*			43*			75	3/16 "	
12*			44*			76	1/4 "	
13*			45*			77	3/16 "	
14*			46*			78	3/16 "	
15*			47*			79	1/8 "	
16*			48*			80	0 "	
17*			49*			81	1/8 "	
18*			50*			82	3/16 "	
19*			51*			83	3/16 "	
20*			52*			84	0 "	
21*			53	3/16 IN/ET		85	1/8 "	
22*			54	1/8 "		86	1/8 "	
23*			55	1/16 "		87	1/8 "	
24*			56	0 "		88	3/16 "	
25*			57	3/16 "		89	3/16 "	
26*			58	1/8 "		90	3/16 "	
27*			59	1/16 "		91	1/8 "	
28*			60	1/16 "		92	1/8 "	
29*			61	0 "		93	0 "	
30*			62	1/16 "		94	0 "	
31*			63	1/16 "		95	1/16 "	
32*			64	1/8 "		96	1/8 "	

TABLE 2
SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
1	3.34		(1)	2.3
2	3.41		(1)	4.6
3	3.57		(1)	6.9
4	3.61		(1)	9.2
5	3.67		(1)	11.5
6	3.62		'0-00 (3)	13.8
7	3.67			16.1
8	3.38		'0-05	18.4
9	3.38			20.7
10	3.37		'0-09	23
11	3.46			25.3
12	3.41		'0-13	27.6
13	3.47			29.9
14	3.27		'0-18 (4)	32.2
15	3.37		(4)	34.5
16	3.29		'0-23 (4)	36.8
17	3.31		(4)	39.1
18	3.28		'0-27 (4)	41.4
19	3.34			43.7
20	3.34		'0-32	46
21	3.36			48.3
22	3.3		'0-37 (4)	50.6
23	3.31		(4)	52.9
24	3.32		'0-41 (4)	55.2
25	3.32		(4)	57.5
26	3.32		'0-46 (4)	59.8
27	3.34			62
28	3.54		'0-50	64.4
29	4.44 (2)			66.6
30	3.38		'0-55	69
31	3.38			71.3
32	3.48		'0-60	73.5
33	3.4			75.8
34	3.48		'0-64	78.1
35	3.42			80.4
36	3.83 (2)		'0-69	82.7
36A	5.65 (2)			
37	3.42		'0-73	85
38	3.43			87.3
39	3.25		'0-78 (4)	89.6
40	3.32		(4)	91.9
41	3.22		'0-83 (4)	94.2
42	3.53			96.5

100641

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
43	3.59		0 - 87	98.8
44	3.46			101.1
45	3.44		0 - 92	103.4
46	3.49			105.7
47	3.44		0 - 97	100.8
48	3.39			110.3
49	3.63		1 - 01	112.5
50	3.54			114.9
51	3.55		1 - 06	117.2
52	3.42			119.5
53	3.37		1 - 10	121.8
54	3.4			124.1
55	3.41		1 - 15	126.4
56	3.42			128.7
57	3.4		1 - 20	131
58	3.42			133.3
59	3.48		1 - 24	135.5
60	3.46			137.9
61	3.43		1 - 29	140.2
62	3.41			142.5
63	3.4		1 - 33	144.8
64	3.4			147.1
65	3.43		1 - 38	149.4
66	3.41			151.7
67	3.4		1 - 42	154
68	3.44			156.3
69	3.4		1 - 47	158.6
70	3.42			160.9
71	3.41		1 - 52	163.2
72	3.42			165.5
73	3.4		1 - 56	167.8
74	3.42			170.1
75	3.41		1 - 61	172.4
76	3.43			174.7
77	3.44		1 - 65	177
78	3.45			179.3
79	3.43		1 - 70	181.6
80	3.41			183.9
81	3.4		1 - 75	186.2
82	3.42			188.5
83	3.4		1 - 79	190.8
84	3.43			193.1
85	3.43		1 - 84	195.4
86	3.42			197.7

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
87	3.42		1 - 38	200
88	3.4			202.2
89	3.41		1 - 93	204.5
90	3.41			206.3
91	3.41		1 - 98	209.1
92	3.4			211.4
93	3.41		2 - 02	213.7
94	3.4			216
95	3.4		2 - 07	218.3
96	3.43		2 - 11	220.6
97	3.51			223
98	3.49		2 - 16	225.2
99	3.41			227.5
100	3.49		2 - 20	230
101	3.42			232.1
102	3.48		2 - 25	234.4
103	3.57			236.7
104	3.64		2 - 30	239
105	3.63			241.3
106	3.69		2 - 34	243.6
107	3.68			245.9
108	3.52		2 - 39	248.2
109	3.42			250.5
110	3.42		2 - 44	252.8
111	3.41			255.1
112	3.43		2 - 48	257.4
113	3.46			259.7
114	3.42		2 - 53	262
115	3.42			264.3
116	3.41		2 - 57	266.6
117	3.42			268.9
118	3.41		2 - 62	271.2
119	3.41			273.5
120	3.46		2 - 66	275.8
121	3.43			278
122	3.51		2 - 71	280.3
123	3.49			282.7
124	3.62		2 - 76	285
125	3.55			287.3
126	3.46		2 - 80	289.6
127	3.48			291.9
128	3.46		2 - 85	294.2

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
129	3.43			296.5
130	3.44		2-89	298.3
131	3.47			301.1
132	3.5		2-94	303.3
133	3.45			305.7
134	3.46		2-99	300.8
135	3.49			310.2
136	3.53		3-03	312.6
137	3.55			314.9
138	3.46		3-08	317.2
139	3.44			319.5
140	3.46		3-12	321.8
141	3.49			324.1
142	3.55		3-17	326.4
143	3.55			328.7
144	3.62		3-22	331
145	3.58			333.3
146	3.58		3-26	335.6
147	3.42			337.9
148	3.47		3-31	340.2
149	3.42			342.5
150	3.44		3-35	344.7
151	3.43			347
152	3.46		3-40	349.3
153	3.41			351.6
154	3.48		3-45	353.9
155	3.49			356.2
156	3.52		3-49	358.5
157	3.42			360.8
158	3.37		3-54	363.1
159	3.47			365.4
160	3.42		3-59	367.7
161	3.42			370
162	3.42		3-63	372.3
163	3.43			374.6
164	3.46		3-67	376.9
165	3.46			379.2
166	3.49		3-72	381.5
167	3.51			383.8
168	3.53		3-77	386.1
169	3.52			388.4
170	3.62		3-81	390.7
171	3.49			393
172	3.57		3-86	395.3

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
173	3.54			397.6
174	3.45		3 - 91	400.1
175	3.53			402.2
176	3.51		3 - 95	404.5
177	3.52			406.8
178	3.63		4 - 00	409.1
179	3.6			411.4
180	3.63		4 - 05	413.7
181	3.63			416
182	3.67		4 - 09	418.3
183	3.67			420.6
184	3.59		4 - 14	422.9
185	3.49			425.2
186	3.61		4 + 18	427.5
187	3.67			429.8
188	3.67		4 + 23	432.1
189	3.62			434.4
190	3.61		4 + 27	436.7
191	3.6			439
192	3.59		4 + 32	441.3
193	3.58			443.6
194	3.57		4 + 37	445.9
195	3.62			448.2
196	3.59		4 + 41	450.5
197	3.59			452.8
198	3.61		4 + 46	455.1
199	3.58			457.4
200	3.6		4 + 50	459.7
201	3.57			462
202	3.65		4 + 55	464.3
203	3.64			466.6
204	3.68		4 + 60	468.9
205	3.61			471.1
206	3.59		4 + 64	473.5
207	3.68			475.8
208	3.63		4 + 69	478
209	3.63			480.3
210	3.68		4 + 73	482.7
211	3.62			484.9
212	3.65		4 + 78	487.2
213	3.62			489.5
214	3.62		4 + 83	491.8
215	3.67			494.1
216	3.67		4 + 87	496.4

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

SHEETPILE NUMBER	SHEETPILE ELEVATION (feet)	GROUND ELEVATION (feet)	STATION NUMBER	WALL LENGTH (feet)
217	3.67			498.7
218	3.61		4 - 92	501
219	3.62			503.3
220	3.65		4 - 96	505.6
221	3.65			507.9
222	3.65		5 - 01	510.2
223	3.63			512.5
224	3.61		5 - 06	514.8
225	3.65			517.1
226	3.65		5 - 10	519.4
227	3.58			521.7
228	3.58		5 - 15	524
229	3.65			526.3
230	3.61		5 - 19	528.6
231	3.63			530.9
232	3.66		5 - 24	533.2
233	3.65			535.5
234	3.61		5 - 29	537.8
235	3.65			540.1
236	3.57		5 - 33	542.4
237	3.53			544.7
238	3.54		5 - 38	547
239	3.65			549.3
240	3.69		5 - 42	551.6
241	3.65			553.9
242	3.63		5 - 47	556.2
243	3.59			558.5
244	3.6		5 - 52	560.8
245	3.52			563.1
246	3.55		5 - 56	565.43
247	3.58			567.7
248	3.63		5 - 60	570
249	3.62			572.2
250	3.59		5 - 65	574.6
251	3.64			576.9
252	3.65		5 - 70	579.2
253	3.66			581.5
254	3.63		(1)	583.8
255	3.65		(1)	586.1
256	3.55		(1)	588.4
257	3.58		(1)	590.1
258	3.59		(1)	593
259	3.61		(1)	595.3

TABLE 2 (continued)

SHEETPILE WALL ELEVATIONS & LENGTHS

NOTES:

1 RETURN LINES CONSISTED OF 6 SHEETS EACH & WERE ERECTED ON OCTOBER 10. THE NORTH END IS SHEETS 254 TO 259 AND THE SOUTH END IS SHEETS 1 TO 6.

2 SHEET MET REFUSAL.

3 INDICATES LOCATION OF CORNER SHEETS.

4 INDICATES SHEETS WHICH ARE OUT OF SPEC. RESULTS ARE ACCEPTABLE FOR SHEETS LOCATED WITHIN THE "OILY FLUID" AREA. THIS AREA RAN APPROXIMATELY FROM STATION 0 - 23 TO 1 - 15.

5 GROUND ELEVATIONS WILL BE AVAILABLE WHEN FINAL GRADING HAS BEEN COMPLETED.

WORK PROCEEDED AT STATION 0 + 00 ON SEPTEMBER 23 AND REACHED STATION 5 + 80 ON OCTOBER 9.

TABLE 3
QUALITY CONTROL TEST RESULTS
FOR SLURRY & BACKFILL MATERIAL

Date	Slurry Entering Trench			Slurry in Trench		Backfill Material	
	Viscosity sec/	Density pcf/	pH	Viscosity sec/	Density pcf/	Slump in	Density pcf/
10/04/91	49.3	64.5	8.5				
10/07/91	80.5	65.2	8.7	79.2	67.0		
10/08/91	98.8	65.5	8.8	91.3	67.9		
10/09/91						1.25 (F) 2.0 (F) 3.0	
10/10/91	40.2	64.7	8.2	82.3	70.0	3.5 3.25	113.0 107.0
10/11/91	41.6	64.5	8.0	64.0	72.3	4.75 1.75 (F) 2.75 (F) 4.5	116 114.5
10/12/91	51.0 51.0	65.5 65.5	8.0 8.0	68.0 68.0	69.8 69.8	4.5 5.5	116.0 114.5
10/14/91	44.9	65.1	8.2	104.6	71.0	6.0	115.5
10/15/91	44.3	64.8	8.3	162.0	72.0	3.5 4.0	124.0
10/16/91	42.5	64.9	8.0	> 6 min	71.0	4.5	
10/17/91	46.5	65.0	8.1	> 6 min	78.0	4.0	119.0
10/18/91	42.2	65.0	8.3	> 5 min	75.5	3.0	
10/19/91	42.4	64.9	8.1	> 5 min	76.0	4.8	120.0
10/21/91	44.8	65.0	8.0	67.7	71.5	5.0	109.0
10/22/91	43.8	64.8	8.4	61.8	69.8	2.0 (F)	
10/23/91	42.5	65.0	8.1			3.25	
10/24/91	41.8	64.9	8.2	52.5	69.0	3.5	
10/25/91	42.2	64.7	8.3	58.5	70.0		
10/26/91	40.8	64.0	8.1	55.0	72.5	3.5	121.0
10/28/91	40.8	64.8	8.0	64.3	73.5	3.25	
10/29/91	41.8	64.5	8.2	163.1	78.0	4.25	
10/30/91	41.6	64.8	8.0				

Legend:

(F) Result Failed To Meet Specified Test Value.

Material Tested Was Reworked Until the Test Was Passed.

100648

TABLE 4

SLURRY WALL EXCAVATION LOG

Station	Date 91	
	10-Oct	
1 - 80		
1 - 82.5		
1 - 85		
1 - 87.5		
1 - 90		
1 - 92.5		
1 - 95		
1 - 97.5		
2 - 00		
2 - 02.5	15.4	
2 - 05	15.2	
2 - 07.5	17.1	
2 - 10	16.8	
2 - 12.5	17.4	
2 - 15	16.8	
2 - 17.5	16.8	
2 - 20	14.5	
2 - 22.5	14.9	
2 - 25	15.2	
2 - 27.5	15.6	
2 - 30	16.1	
2 - 32.5	16.2	
2 - 35	15.5	
2 - 37.5	13.9	
2 - 40	14.2	
2 - 42.5	14.2	
2 - 45	14.7	
2 - 47.5	14.8	
2 - 50	14.9	
2 - 52.5	15.4	
2 - 55	15.1	
2 - 57.5	15.2	
2 - 60	14.3	
2 - 62.5	14.3	
2 - 65	14.2	
2 - 67.5	14.0	

Station	Date 91		
	17-Oct	18-Oct	19-Oct
8 - 10	17.0		
8 - 12.5	17.5		
8 - 15	17.8		
8 - 17.5	17.2		
8 - 20	16.8		
8 - 22.5	16.0		
8 - 25	15.6		
8 - 27.5	15.5		
8 - 30	15.9		
8 - 32.5	15.2		
8 - 35	15.8		
8 - 37.5	15.2		
8 - 40	14.9		
8 - 42.5	15.2		
8 - 45	16.1		
8 - 47.5	16.6		
8 - 50		16.8	
8 - 52.5		15.3	
8 - 55		16.0	
8 - 57.5		15.5	
8 - 60		16.2	
8 - 62.5		16.3	
8 - 65		16.0	
8 - 67.5		16.1	
8 - 70		17.0	
8 - 72.5		17.0	
8 - 75		17.2	
8 - 77.5		17.6	
8 - 80		17.7	
8 - 82.5		18.0	
8 - 85		17.6	
8 - 87.5			17.4
8 - 90			17.8
8 - 92.5			17.2
8 - 95			16.9
8 - 97.5			16.6

The Depths For Each Station Are Given In Feet.

TABLE 4 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date
	'91
	'10-Oct
2 - 70	15.2
2 - 72.5	14.8
2 - 75	15.1
2 - 77.5	14.3
2 - 80	13.9
2 - 82.5	13.9
2 - 85	14.0
2 - 87.5	14.1
2 - 90	14.1
2 - 92.5	14.3
2 - 95	16.3
2 - 97.5	16.5
3 - 00	15.6
3 - 02.5	15.8
3 - 05	15.4
3 - 07.5	15.6
3 - 10	15.0
3 - 12.5	14.7
3 - 15	14.9
3 - 17.5	15.4
3 - 20	15.5
3 - 22.5	16.2
3 - 25	16.0
3 - 27.5	15.8
3 - 30	15.0
3 - 32.5	14.6
3 - 35	14.9
3 - 37.5	15.5
3 - 40	15.4
3 - 42.5	15.6
3 - 45	16.1
3 - 47.5	17.5
3 - 50	17.6
3 - 52.5	17.0
3 - 55	16.5
3 - 57.5	15.5

Station	Date	
	'91	
	'11-Oct	'12-Oct
3 - 60	15.0	
3 - 62.5	15.8	
3 - 65	15.8	
3 - 67.5	14.8	
3 - 70	15.5	
3 - 72.5	15.4	
3 - 75	15.4	
3 - 77.5	15.3	
3 - 80		14.1
3 - 82.5		14.1
3 - 85		14.5
3 - 87.5		14.5
3 - 90		15.6
3 - 92.5		15.7
3 - 95		15.5
3 - 97.5		15.5
4 - 00		14.4
4 - 02.5		15.3
4 - 05		14.9
4 - 07.5		15.0
4 - 10		14.6
4 - 12.5		14.6
4 - 15		14.5
4 - 17.5		14.7
4 - 20		14.0
4 - 22.5		13.5
4 - 25		14.0
4 - 27.5		14.5
4 - 30		14.2
4 - 32.5		14.5
4 - 35		15.0
4 - 37.5		13.5
4 - 40		13.7
4 - 42.5		14.0
4 - 45		14.0
4 - 47.5		14.2

Station	Date	
	'91	
	'12-Oct	'14-Oct
4 - 50	14.0	
4 - 52.5	13.3	
4 - 55	13.2	
4 - 57.5	12.8	
4 - 60	12.9	
4 - 62.5	12.8	
4 - 65	12.5	
4 - 67.5	12.7	
4 - 70	13.0	
4 - 72.5	12.7	
4 - 75	12.5	
4 - 77.5	12.7	
4 - 80	13.1	
4 - 82.5	13.0	
4 - 85	12.9	
4 - 87.5	14.3	
4 - 90	13.3	
4 - 92.5	14.5	
4 - 95	13.0	
4 - 97.5	13.5	
5 - 00	13.5	
5 - 02.5	13.0	
5 - 05	13.0	
5 - 07.5	13.4	
5 - 10		13.7
5 - 12.5		13.5
5 - 15		14.1
5 - 17.5		13.8
5 - 20		14.0
5 - 22.5		13.8
5 - 25		14.2
5 - 27.5		13.8
5 - 30		14.5
5 - 32.5		16.3
5 - 35		16.6
5 - 37.5		17.1

TABLE 4 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date 91
	14-Oct
5 - 40	17.3
5 - 42.5	16.6
5 - 45	15.8
5 - 47.5	14.7
5 - 50	15.0
5 - 52.5	14.7
5 - 55	14.9
5 - 57.5	14.5
5 - 60	15.0
5 - 62.5	15.2
5 - 65	15.1
5 - 67.5	14.9
5 - 70	16.2
5 - 72.5	16.3
5 - 75	16.4
5 - 77.5	15.6
5 - 80	15.5
5 - 82.5	16.1
5 - 85	15.3
5 - 87.5	15.2
5 - 90	15.3
5 - 92.5	15.1
5 - 95	15.8
5 - 97.5	15.1
6 - 00	15.3
6 - 02.5	15.6
6 - 05	15.6
6 - 07.5	16.0
6 - 10	15.5
6 - 12.5	16.0
6 - 15	16.2
6 - 17.5	16.1
6 - 20	16.2
6 - 22.5	15.8
6 - 25	16.0
6 - 27.5	16.5

Station	Date 91		
	14-Oct	15-Oct	16-Oct
6 - 30	17.0		
6 - 32.5	17.5		
6 - 35		18.5	
6 - 37.5		18.0	
6 - 40		18.0	
6 - 42.5		18.0	
6 - 45		18.0	
6 - 47.5		17.5	
6 - 50		17.5	
6 - 52.5		16.2	
6 - 55		16.5	
6 - 57.5		15.5	
6 - 60		15.0	
6 - 62.5		14.8	
6 - 65		14.8	
6 - 67.5		14.7	
6 - 70		14.6	
6 - 72.5		15.0	
6 - 75		15.5	
6 - 77.5		14.7	
6 - 80		14.8	
6 - 82.5		15.0	
6 - 85		15.2	
6 - 87.5		15.5	
6 - 90		15.1	
6 - 92.5		14.8	
6 - 95		15.0	
6 - 97.5		15.1	
7 - 00		15.6	
7 - 02.5		16.0	
7 - 05		16.0	
7 - 07.5		15.3	
7 - 10			14.5
7 - 12.5			15.0
7 - 15			15.0
7 - 17.5			15.4

Station	Date 91	
	15-Oct	16-Oct
7 - 20	15.5	
7 - 22.5	15.3	
7 - 25	15.5	
7 - 27.5	15.3	
7 - 30	16.5	
7 - 32.5	16.0	
7 - 35	14.3	
7 - 37.5	15.9	
7 - 40	15.5	
7 - 42.5	15.6	
7 - 45	15.3	
7 - 47.5	15.6	
7 - 50	15.9	
7 - 52.5	16.0	
7 - 55	15.4	
7 - 57.5	16.0	
7 - 60	17.0	
7 - 62.5	17.3	
7 - 65	17.0	
7 - 67.5	17.1	
7 - 70	17.5	
7 - 72.5	17.2	
7 - 75	16.3	
7 - 77.5	16.3	
7 - 80	17.2	
7 - 82.5	17.3	
7 - 85	18.0	
7 - 87.5	17.5	
7 - 90	17.5	
7 - 92.5	17.0	
7 - 95		17.1
7 - 97.5		17.0
8 - 00		16.0
8 - 02.5		16.0
8 - 05		16.5
8 - 07.5		16.5

TABLE 4 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date	
	91	
	19-Oct	21-Oct
9 - 00	16.9	
9 - 02.5	17.5	
9 - 05	7.5	
9 - 07.5	17.8	
9 - 10	18.1	
9 - 12.5	18.0	
9 - 15	17.5	
9 - 17.5	17.2	
9 - 20	16.5	
9 - 22.5	16.9	
9 - 25	17.2	
9 - 27.5	17.1	
9 - 30	16.5	
9 - 32.5	16.8	
9 - 35		16.0
9 - 37.5		17.5
9 - 40		17.0
9 - 42.5		16.8
9 - 45		16.1
9 - 47.5		16.3
9 - 50		16.0
9 - 52.5		16.6
9 - 55		16.3
9 - 57.5		16.5
9 - 60		16.0
9 - 62.5		15.7
9 - 65		15.7
9 - 67.5		15.8
9 - 70		15.4
9 - 72.5		15.9
9 - 75		16.0
9 - 77.5		16.4
9 - 80		17.0
9 - 82.5		17.2
9 - 85		17.0
9 - 87.5		17.1

Station	Date	
	91	
	29-Oct	
14 - 30	15.2	
14 - 32.5	14.9	
14 - 35	14.6	
14 - 37.5	14.7	
14 - 40	14.6	
14 - 42.5	14.6	
14 - 45	14.5	
14 - 47.5	15.3	
14 - 50	16.0	
14 - 52.5	16.5	
14 - 55	15.5	
14 - 57.5	14.9	
14 - 60	14.6	
14 - 62.5	14.7	
14 - 65		
14 - 67.5		
14 - 70		
14 - 72.5		
14 - 75		
14 - 77.5		
14 - 80		
14 - 82.5		
14 - 85		
14 - 87.5		
14 - 90		
14 - 92.5		
14 - 95		
14 - 97.5		
15 - 00		
15 - 02.5		
15 - 05		
15 - 07.5		
15 - 10		
15 - 12.5		
15 - 15		
15 - 17.5		

TABLE 4 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date	
	91	
	21-Oct	22-Oct
9 - 90	17.2	
9 - 92.5	16.6	
9 - 95	16.0	
9 - 97.5		17.2
10 - 00		17.5
10 - 02.5		17.5
10 - 05		18.0
10 - 07.5		17.5
10 - 10		17.2
10 - 12.5		17.8
10 - 15		17.6
10 - 17.5		17.4
10 - 20		16.8
10 - 22.5		17.0
10 - 25		17.2
10 - 27.5		16.6
10 - 30		16.0
10 - 32.5		16.8
10 - 35		17.0
10 - 37.5		16.5
10 - 40		17.0
10 - 42.5		17.0
10 - 45		17.6
10 - 47.5		18.0
10 - 50		18.5
10 - 52.5		18.2
10 - 55		18.3
10 - 57.5		18.3
10 - 60		18.8
10 - 62.5		18.5
10 - 65		17.8
10 - 67.5		17.0
10 - 70		16.8

Station	Date	
	91	
	23-Oct	24-Oct
10 - 72.5	16.0	
10 - 75	16.3	
10 - 77.5	16.0	
10 - 80	15.8	
10 - 82.5	16.3	
10 - 85	16.2	
10 - 87.5	15.5	
10 - 90	14.8	
10 - 92.5	15.0	
10 - 95	15.2	
10 - 97.5	15.9	
11 - 00		15.3
11 - 02.5		17.0
11 - 05		16.0
11 - 07.5		16.2
11 - 10		16.0
11 - 12.5		16.2
11 - 15		15.8
11 - 17.5		16.0
11 - 20		16.2
11 - 22.5		16.1
11 - 25		15.9
11 - 27.5		15.8
11 - 30		16.0
11 - 32.5		16.3
11 - 35		16.5
11 - 37.5		16.0
11 - 40		15.8
11 - 42.5		15.6
11 - 45		16.1
11 - 47.5		16.4
11 - 50		16.3
11 - 52.5		16.5
11 - 55		17.0
11 - 57.5		17.2

Station	Date	
	91	
	24-Oct	25-Oct
11 - 60	16.6	
11 - 62.5	16.2	
11 - 65	15.6	
11 - 67.5	16.4	
11 - 70	17.0	
11 - 72.5	17.0	
11 - 75	17.1	
11 - 77.5	16.8	
11 - 80	16.4	
11 - 82.5	16.3	
11 - 85	16.3	
11 - 87.5	16.3	
11 - 90		16.1
11 - 92.5		16.3
11 - 95		16.5
11 - 97.5		16.6
12 - 00		16.7
12 - 02.5		16.6
12 - 05		16.6
12 - 07.5		16.6
12 - 10		16.7
12 - 12.5		16.6
12 - 15		16.6
12 - 17.5		16.6
12 - 20		16.6
12 - 22.5		16.6
12 - 25		16.4
12 - 27.5		16.4
12 - 30		16.4
12 - 32.5		16.4
12 - 35		16.4
12 - 37.5		16.3
12 - 40		16.3
12 - 42.5		16.3
12 - 45		16.3
12 - 47.5		16.3

TABLE 4 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date '91		
	25-Oct	26-Oct	28-Oct
12 - 50	16.0		
12 - 52.5	15.3		
12 - 55	14.8		
12 - 57.5	15.0		
12 - 60		16.3	
12 - 62.5		16.5	
12 - 65		15.5	
12 - 67.5		16.0	
12 - 70		15.0	
12 - 72.5		15.1	
12 - 75		15.0	
12 - 77.5		15.1	
12 - 80		14.8	
12 - 82.5		14.8	
12 - 85		15.0	
12 - 87.5		16.0	
12 - 90		15.2	
12 - 92.5		16.2	
12 - 95		16.2	
12 - 97.5		15.9	
13 - 00		16.2	
13 - 02.5		15.6	
13 - 05		16.0	
13 - 07.5		15.0	
13 - 10		16.0	
13 - 12.5		15.3	
13 - 15		14.0	
13 - 17.5		15.4	
13 - 20			16.4
13 - 22.5			16.8
13 - 25			16.2
13 - 27.5			15.3
13 - 30			15.3
13 - 32.5			15.6
13 - 35			15.6
13 - 37.5			15.2

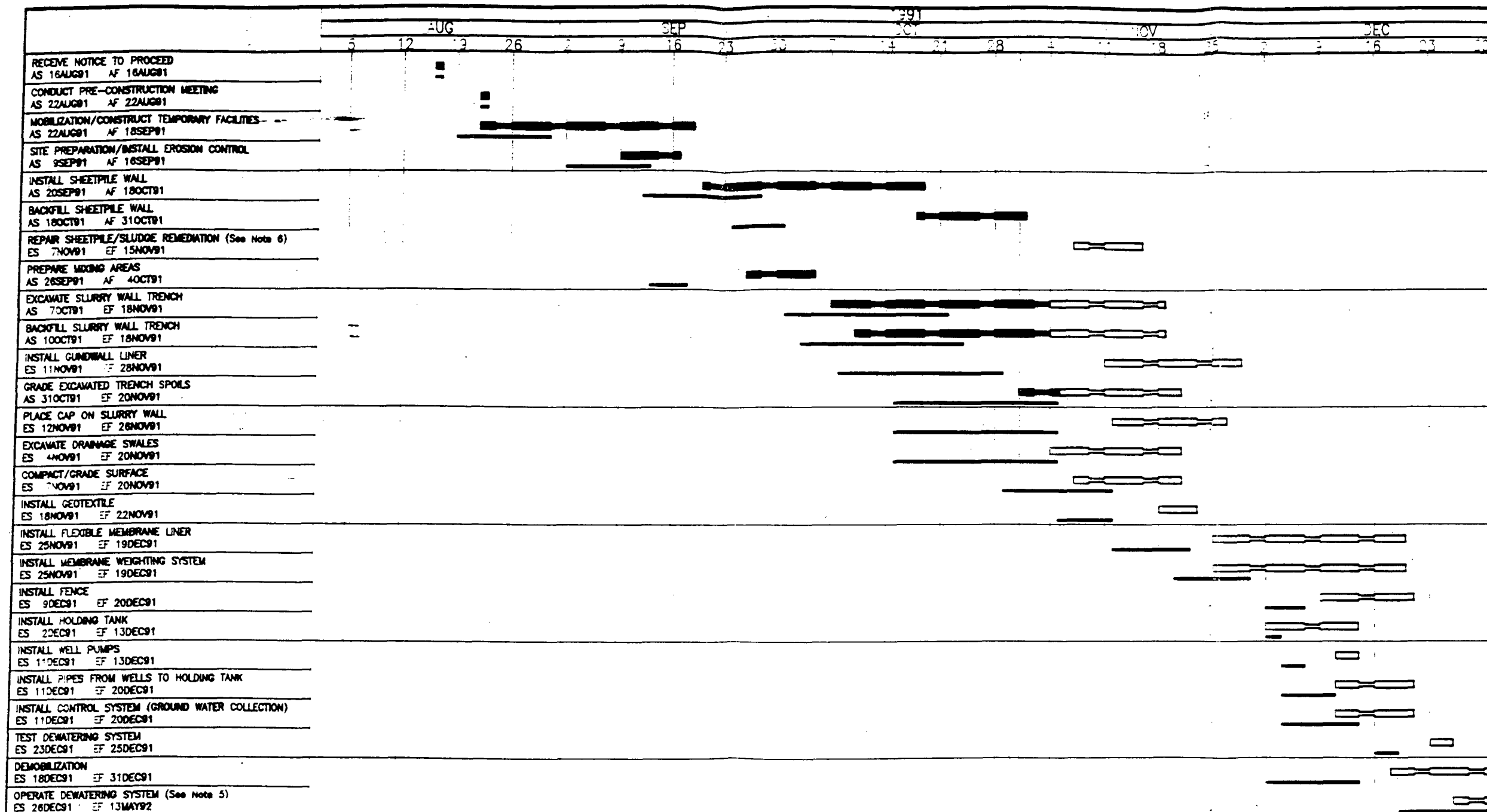
Station	Date '91	
	28-Oct	29-Oct
13 - 40	15.0	
13 - 42.5	15.3	
13 - 45	15.5	
13 - 47.5	15.2	
13 - 50	15.5	
13 - 52.5	15.3	
13 - 55	15.0	
13 - 57.5	15.2	
13 - 60	15.5	
13 - 62.5	15.7	
13 - 65	15.0	
13 - 67.5	15.5	
13 - 70	15.0	
13 - 72.5	15.1	
13 - 75	14.8	
13 - 77.5	15.0	
13 - 80	15.2	
13 - 82.5	15.5	
13 - 85	15.4	
13 - 87.5	15.2	
13 - 90	15.0	
13 - 92.5	15.1	
13 - 95	15.5	
13 - 97.5	16.0	
14 - 00	15.5	
14 - 02.5	15.3	
14 - 05	16.0	
14 - 07.5	15.0	
14 - 10	15.1	
14 - 12.5	14.8	
14 - 15	15.1	
14 - 17.5	14.8	
14 - 20	14.0	
14 - 22.5		15.0
14 - 25		14.0
14 - 27.5		14.5

TABLE NO 5

SUMMARY OF SOIL-BENTONITE PERMEABILITY TESTING

[illegible]

10655

DRAWING
NUMBER 90-198-B72**NOTES:**

1. THIS PROGRESS SCHEDULE IS CONTINGENT UPON EPA ACTION CONCERNING THE OILY FLUID PROBLEM AND EPA APPROVAL OF SHEETPILE CALCULATION PACKAGE.
2. THIS CONSTRUCTION SCHEDULE IS BASED ON RECEIPT OF A NOTICE TO PROCEED ON AUGUST 16, 1991.
3. THE TOTAL DURATION OF CONSTRUCTION FROM MOBILIZATION TO DEMOBILIZATION IS PLANNED TO BE 18 WEEKS.
4. DURATIONS ARE BASED UPON FIVE DAY WORK WEEKS.
5. THE DEWATERING OPERATION WILL CONTINUE ON AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.
6. BACKFILL OF SHEETPILE WALL COMPLETE EXCEPT FOR SLUDGE AREA. REMAINING SHEETPILE WALL BACKFILL IN OILY SLUDGE AREA WILL BE PERFORMED AFTER SLUDGE REMEDIATION.

LEGEND:

- ACTIVITY BAR
- CRITICAL ACTIVITY
- TARGET DATES

OCTOBER PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR
COOPERATING PRP GROUP
Canonie Environmental

8-19-91	REVISED FOR DELAY IN NOTICE TO PROCEED WITH CONSTRUCTION	WLM	J.R.	F.J.G.
7-18-91	ISSUED FOR FINAL AGENCY REVIEW	WLM	D.H.	J.S.
7/6/91	UPDATED 11-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.R.	M.C.	J.E.M.
10-1-91	UPDATED 10-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WLM	M.C.	J.E.M.
No.	DATE	ISSUE / REVISION		
		DRAWN BY/CHKD BY/APPD BY		

DATE: 3-14-91	FIGURE 1	DRAWING NUMBER 90-198-B72
SCALE: NONE		

100656

09-06-91 04:47 PM FROM HI TECH REMEDIATION

SEP 06 '91 16:14 MT.HOPE TECH.CENTER

P.2/2

MT. HOPE ROCK PRODUCTS, INC.

FAX 201-344-1028

886 MT. HOPE ROAD • WHARTON, NEW JERSEY 07885 • PHONE 201-344-7741

HI-TECH

Date: 09/06/91

Fax: 1-616-982-1941

Phone: 1-201-438-6774

Attn: Greg

Re: SEP Carlstadt

Dear Greg,

The material listed below is to be shipped to the above listed project. It meets the specifications listed.

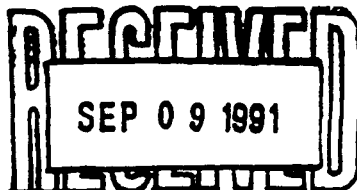
Sieve	XPass	Spec.
1 1/2"	100.0%	100%
3/4"	81.4%	75-100%
3/8"	59.2%	55-85%
#4	51.5%	40-70%
#20	25.2%	15-45%
#60	18.0%	5-30%
#200	3.0%	0-20%

If there are any further questions please feel free to call.

Yours truly,
MOUNT HOPE ROCK PRODUCTS INC.

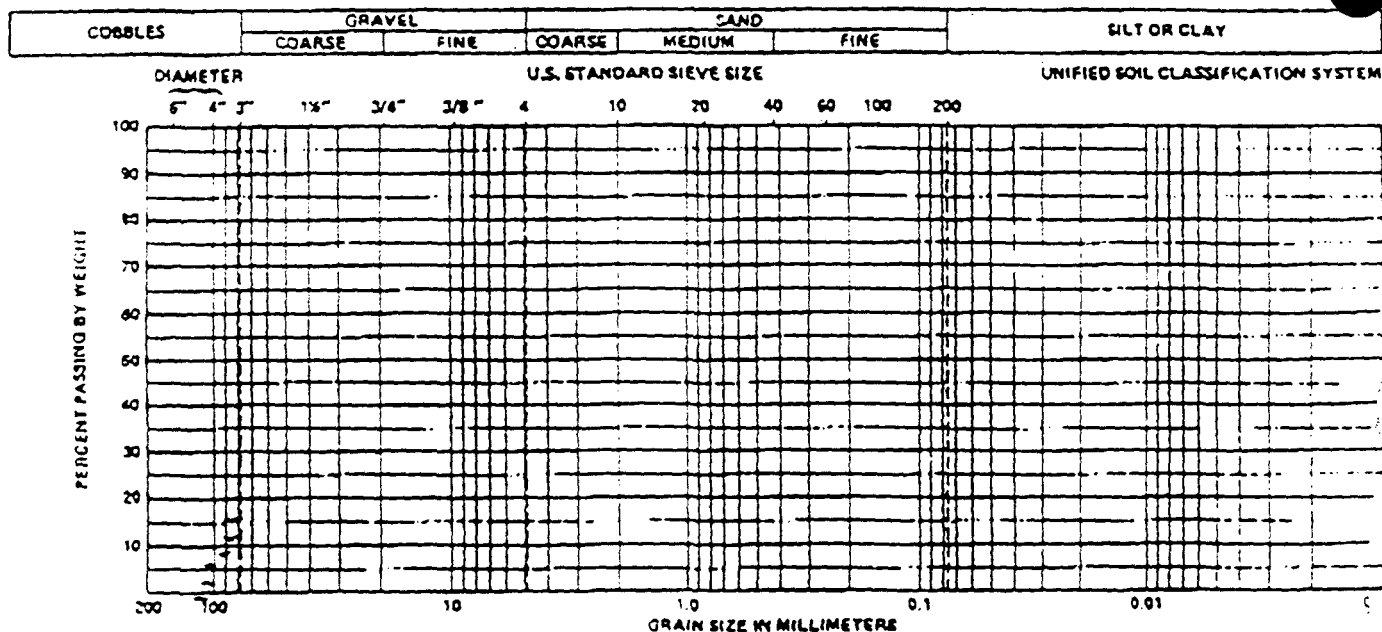
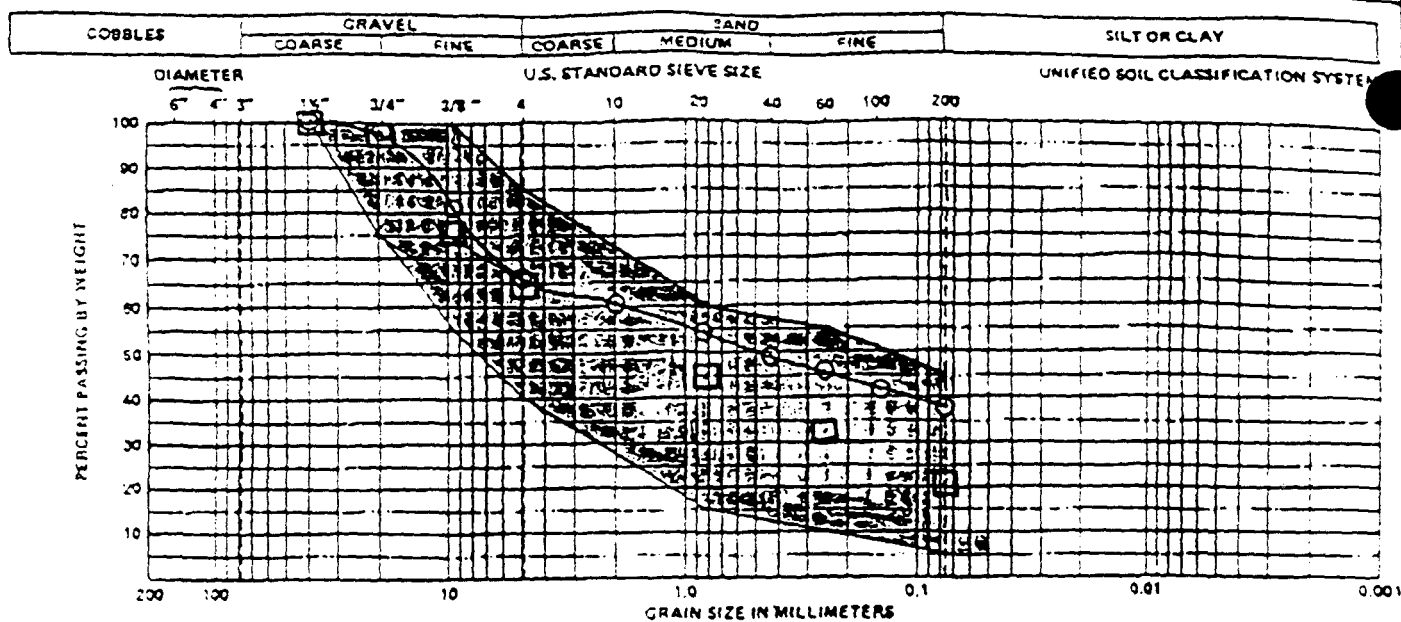


Colleen Cronan
Geotechnics G.C./G.A.



100657

PARTICLE-SIZE DISTRIBUTION



SAMPLE TAKEN @ QUARRY 10/1/91; Rich B. Of CES Present
 100658

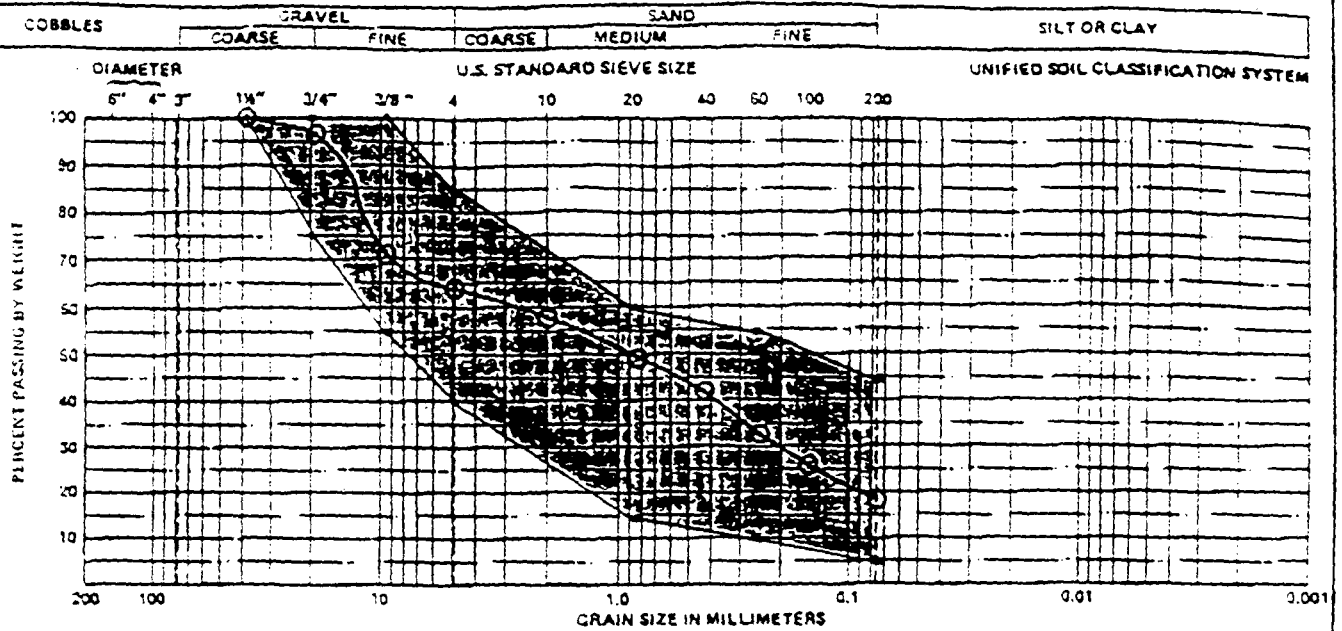
100658

PROJECT NO. 9104425 D

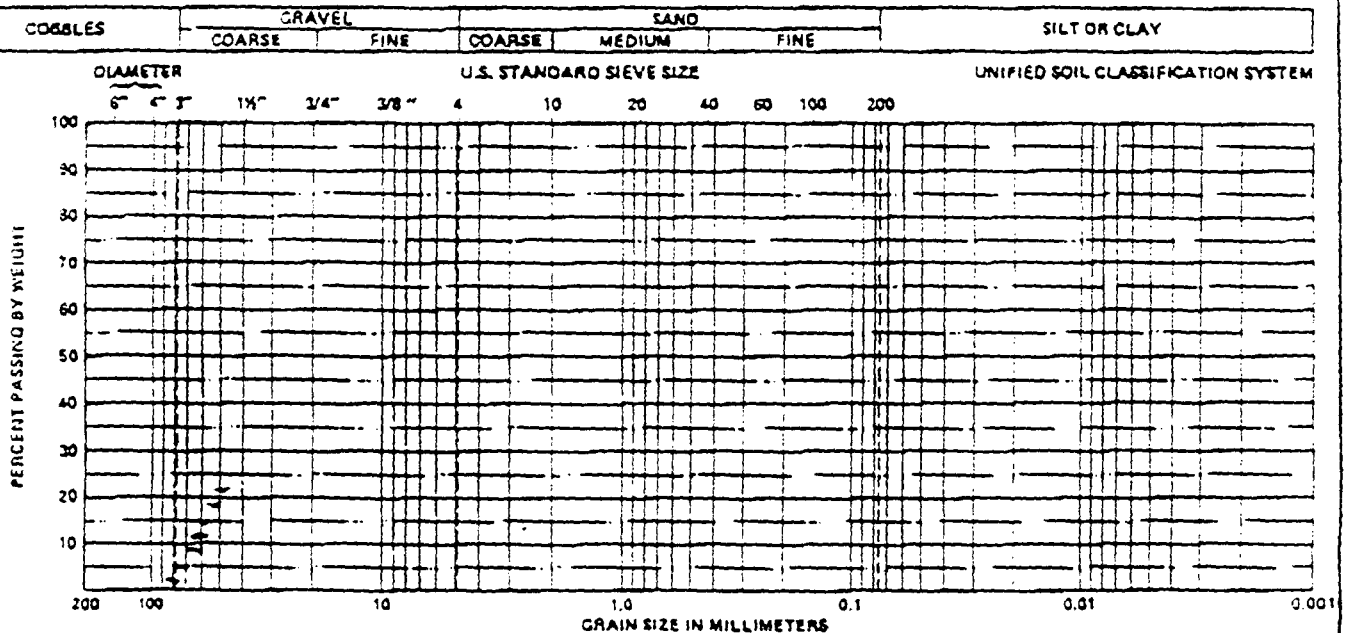
REVIEWED BY:

DRAWING: AK

PARTICLE-SIZE DISTRIBUTION



BORING	SAMPLE	DEPTH (ft)	SYMBOL	CLASSIFICATION	w (%)	w _L (%)	w _p (%)
Stack	pile Sample		⊙	SM, brown gravelly c-f SAND,			
	No. 2			some silt			



BORING	SAMPLE	DEPTH (ft)	SYMBOL	CLASSIFICATION	w (%)	w _L (%)	w _p (%)



P.O. Box 42842

HOUSTON, TEXAS 77242

713 972-1310

TELEX 165743

September 18, 1991

Mr. Frank Gontowski
Canonie Environmental Services
216 Patterson Plank Road
Carlstadt, NJ 07072

LETTER OF CERTIFICATION

This is to certify that the product FEDERAL JEL 90
as manufactured by M-I DRILLING FLUIDS COMPANY conforms to
the requirements as specified in API-13A SECTION 4.

A handwritten signature in black ink, appearing to read 'Clay Winnard', with a large, stylized loop at the end.

Clay Winnard



P.O. BOX 42842 HOUSTON, TEXAS 77242 713 972-1310 TELEX 166743

FEDERAL JEL "90"

description

FEDERAL JEL sodium bentonite is made from the finest blends of western montmorillonite clays. It is designed to meet exacting customer specifications. FEDERAL JEL "90" sodium bentonite is a consistent, high quality material which has proven successful in a variety of civil engineering applications.

applications

*SLURRY TRENCH CUTOFF WALL
CEMENT/BENTONITE CUTOFF WALL
SLURRY TRENCH BACKFILL ADDITIVE*

advantages

... Meets or Exceeds A.P.I. 13A Specification

typical chemical analysis

SiO ₂	61.3% to 64.0%	K ₂ O	0.4%
Al ₂ O ₃	19.8%	Na ₂ O	2.2%
Fe ₂ O ₃	3.9%	TiO ₂	0.1%
MgO	1.3%	Trace Elements	3.2%
CaO	0.6%	H ₂ O (Crystal)	7.2%

physical properties

	Typical Analysis	A.P.I. 13A Specification
Fann 600 Reading	35.0 cps	30.0 cps min
Fann 300 Reading	25.0 cps	.
Plastic Viscosity	10.0 cps	.
Yield Point	3 x plastic vis max	3 x plastic vis max
Apparent Viscosity	17.5 cps	.
Filtrate	13.5 ml	15.0 ml max
Dry Screen Analysis (% minus U.S. 200 Mesh)	80.0%	.
Wet Screen Analysis (% Retained on U.S. 200 Mesh)	2.5-3.0%	4.0% Max
Moisture at time of shipment	7.0-9.0%	10.0% max
pH	9.0-10.0	

packaging

Bulk Carload/Truckload Quantities
100- & 50-lb Multiwall Kraft Bags
4,000-lb Bulk Bags

MEMO

To: Joseph Mihm

90-198

From: Peter Porter

December 5, 1991

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
NOVEMBER 1991
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the quality assurance/quality control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period from November 1, 1991 through November 30, 1991 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for December 1991;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - QA/QC Concerns;
- o Section 6.0 - Recommended Solutions to QA/QC Concerns;
- o Section 7.0 - Status of Solutions to QA/QC Concerns.

2.0 - Work Completed

During the period from November 1, 1991 through November 30, 1991, Canonie

100662

CanonieEnvironmental

Joseph Mihm

2

December 5, 1991

completed the work as outlined in the following sections:

- o Section 2.1 - Backfill sheet pile wall;
- o Section 2.2 - "Oily" Fluid Action;
- o Section 2.3 - Sheet Pile Wall Support/Remediation;
- o Section 2.4 - Excavation and Backfill of Slurry Wall;
- o Section 2.5 - Drainage Swale Excavation;
- o Section 2.6 - Site Grading.

2.1 - Backfill Sheet Pile Wall

No specific QA/QC testing was required for this activity. However, the backfilling operation required 18" maximum loose lifts compacted with two passes of a walk-behind compactor. This operation was visually reviewed by Canonie personnel to ensure that work was performed in accordance with the Technical Specifications and Construction Drawings. The backfilling operation was temporarily stopped after the operation caused a deflection in the sheet pile wall. To prevent any further deflections, Canonie lowered the ground elevation by cutting a bench to reduce ground pressures exerted on the sheet pile wall. The backfilling operation was continued after the bench was constructed.

2.2 - "Oily" Fluid Action

Canonie completed the proposed actions to investigate and contain the "oily fluid" problem in the southeastern corner of the site under direct supervision of EPA

Joseph Mihm

3

December 5, 1991

representatives Pat Evangelista and Raymond Basso. The EPA representatives directed Canonie to stop the investigation / containment after completing step 6 of 20 and gave Canonie verbal approval to continue with work in the oily fluid area.

2.3 - Sheet Pile Wall Support / Remediation

The following work was performed from station 3 + 55 to 3 + 90 (Sheet # 155 to # 170) prior to slurry wall excavation to stabilize the sheet pile wall on November 21, 1991:

- o Connected water to D25s with cables;
- o Backfill placed behind sheet pile wall was excavated;
- o Sheet pile wall was pulled vertical;
- o Stone was placed behind sheet pile wall;
- o Cables were attached to a single deadman;
- o Mats were placed;
- o Continued slurry wall excavation with the CAT 225 excavator.

The following work was performed from station 4 + 15 to station 4 + 38 (Sheet # 181 to # 191) prior to slurry wall excavation to stabilize the sheet pile wall on November 23, 1991:

- o Connected water to front end loader with cables;

100664

CanonieEnvironmental

Joseph Mihm

4

December 5, 1991

- o Applied tension to cables;
- o Mats were placed;
- o Continued slurry wall excavation with the CAT 225 excavator;
- o Released tension from cables (Nov. 23, 1991);
- o Backfilled slurry wall (Nov. 25, 1991);
- o Applied tension to sheet pile wall (Nov. 26, 1991);
- o Stone placed behind sheet pile wall (Nov. 26, 1991).

Some deflection of the sheet pile wall was noted during the slurry wall excavation through both sections as outlined in Section 5.0.

2.4 - Excavation and Backfill of Slurry Wall

Excavation and backfill of the slurry wall required specific QA/QC testing and inspection. The slurry mixture required testing once per 10 hour work shift for in-pond and in-trench slurry to ensure quality. See Table 1 for slurry mixture test results. The slurry wall excavation was sounded every 2 1/2 feet to ensure that the trench was keyed properly. See Table 2 for slurry wall depths. Bottom samples every ten feet were preserved for 48 hours or visually examined to verify that the bottom of the slurry wall is keyed properly.

The backfill material required one slump test per each 500 cubic yards mixed and one permeability sample of in-trench backfill for every 200 linear feet of slurry wall constructed. See Table 3 for permeability results. All QA/QC tests and inspections

Joseph Mihm

5

December 5, 1991

which were not in accordance with the Technical Specifications and the Construction Drawings, have been recorded and corrected.

Excavation and backfill of the slurry wall was completed on November 25, 1991 and all required QA/QC test results were submitted to Langan Environmental Services, Inc. (Langan).

2.5 - Excavation of Drainage Swales

No specific QA/QC testing was required for this activity. However, Canonie set grade stakes in accordance with the Soil Erosion and Sediment Control Plan to produce the drainage slopes for the drainage swale excavation. This excavation was completed on November 25, 1991. Minimal grading may be required after completion of the vertical liner installation and excavation of the liner anchor trench.

2.6 - Site Grading

No specific QA/QC testing was required for this activity. Canonie continued site grading activities using trench spoils in accordance with the Technical Specifications and Construction Drawings. Canonie is currently waiting for approval of Modification Number 14 which will provide slight alterations to the final grading plan.

3.0 - Work Scheduled for December 1991

The work items scheduled for the month of December 1991 include the following:

- o Continuation of site grading;
- o Installation of the slurry wall vertical liner;

100666

CanonieEnvironmental

Joseph Mihm

6

December 5, 1991

- o Construction of the slurry wall cap;
- o Excavation of the infiltration barrier anchor trench;
- o Initiation of the infiltration barrier construction;
- o Initiation of the decontamination and demobilization of construction equipment.

4.0 - Changes to Project Schedule

At this time, the project is behind schedule by approximately one month. Canonie anticipates that the completion date will slip to approximately the middle of January. Figure 1 shows the updated progress schedule (revision 7).

5.0 - QA/QC Concerns

A QA/QC concern was encountered during the sheet pile wall remediation activities. Some deflections were noted during excavation activities along both deflected areas while the deadman and cables were in place. This was due to vibrational loading which occurred while removing large stone blocks located below grade. Canonie is currently reviewing possible remedies as outlined in Section 6.0.

6.0 - Recommended Solutions to QA/QC Concerns

Due to the EPA directive dated November 20, 1991 titled Deflected Sheetpile Wall Proposed Remedy, Canonie is not permitted to perform any work to the sheet pile wall in the deflected areas if the work may in any way compromise the integrity of the slurry wall. Therefore, Canonie is currently evaluating other alternatives for restoration of the deflected sheet piles. These alternatives were presented to Langan in letters

CanonieEnvironmental

Joseph Mihm

7

December 5, 1991

from Joseph Mihm to Donald Murphy.

7.0 - Status of Solutions to QA/QC Concerns

Due to the EPA directives given for driving the sheet piles located within the oily fluid area, Canonie is unable to correct the sheets that do not meet the criteria in the Technical Specifications and the QAPP.

The sheet pile calculations and the method of support for the two areas of the sheet pile wall that have deflected were approved by the NJDEPE Division of Coastal Resources. The work was performed in accordance with the approved method with minor alterations as discussed in Section 2.3.

PFP/jc

Attachments

cc: Mark Seel, Langan
Curt DeWolf, Canonie
Frank Gontowski, Canonie
Jim Semple, Canonie

100668

CanonieEnvironmental

TABLE 1

QUALITY CONTROL TEST RESULTS FOR SLURRY & BACKFILL MATERIAL

Date	Slurry Entering Trench			Slurry in Trench		Backfill Material	
	Viscosity sec/	Density pcf/	pH	Viscosity sec/	Density pcf/	Slump in/	Density pcf/
11/14/91	40.8	64.5	3.1	65.2	68.0	3.0	-
11/15/91	40.2	64.3	3.2	108	69.0	4.75	-
11/16/91	40.2	65.0	3.1	130	76.0	3.5	125.0
11/18/91	40.3	64.5	3.1	128	71.0	4.0	-
11/19/91	40.4	64.5	3.2	Note 1	72.5	-	-
11/20/91	40.2	64.5	64.5	141	73.0	5.0	-
11/21/91	40.9	64.5	3.1	Note 1	75.0	3.25	-
11/22/91	40.1	64.5	3.2	Note 1	78.5	-	-
11/23/91	-	-	-	Note 1	78.0	5.5	128.5
11/25/91	-	-	-	-	-	4.0	-

Notes:

- 1) Organic material in slurry sample clogged marsh funnel; test could not be performed.
- 2) No slurry wall activities took place from October 31, 1991 thru November 13, 1991.

TABLE 2

SLURRY WALL EXCAVATION LOG

Station	Date '91	
	15-Nov	16-Nov
0 + 00		13.9
0 + 02.5		14.1
0 + 05		14.5
0 + 07.5		14.0
0 + 10		14.0
0 + 12.5		14.3
0 + 15		14.2
0 + 17.5		14.5
0 + 20		14.6
0 + 22.5		15.0
0 + 25	14.8	
0 + 27.5	14.6	
0 + 30	14.4	
0 + 32.5	14.3	
0 + 35	14.6	
0 + 37.5	14.5	
0 + 40	14.6	
0 + 42.5	14.3	
0 + 45	14.8	
0 + 47.5	15.3	
0 + 50	14.4	
0 + 52.5	14.6	
0 + 55	14.5	
0 + 57.5	14.8	
0 + 60	15.0	
0 + 62.5	16.0	
0 + 65	16.5	
0 + 67.5	16.4	
0 + 70	16.5	
0 + 72.5	17.0	
0 + 75	16.7	
0 + 77.5	16.5	
0 + 80	16.0	
0 + 82.5	15.0	
0 + 85	14.5	
0 + 87.5	14.8	

Station	Date '91	
	14-Nov	15-Nov
0 + 90		15.0
0 + 92.5		14.6
0 + 95		14.5
0 + 97.5		14.6
1 + 00		14.8
1 + 02.5		15.4
1 + 05		15.6
1 + 07.5		15.3
1 + 10		15.5
1 + 12.5	15.6	
1 + 15	15.4	
1 + 17.5	15.3	
1 + 20	15.0	
1 + 22.5	15.1	
1 + 25	14.8	
1 + 27.5	14.9	
1 + 30	15.4	
1 + 32.5	15.5	
1 + 35	15.2	
1 + 37.5	15.6	
1 + 40	15.3	
1 + 42.5	15.0	
1 + 45	14.9	
1 + 47.5	15.0	
1 + 50	15.0	
1 + 52.5	14.6	
1 + 55	14.7	
1 + 57.5	14.6	
1 + 60	14.8	
1 + 62.5	15.0	
1 + 65	14.9	
1 + 67.5	15.3	
1 + 70	15.5	
1 + 72.5	15.6	
1 + 75	15.4	
1 + 77.5	15.5	

Station	Date '91	
	14-Nov	15-Nov
1 + 80	15.1	
1 + 82.5	15.0	
1 + 85	14.6	
1 + 87.5	14.8	
1 + 90	15.0	
1 + 92.5	15.3	
1 + 95	15.0	
1 + 97.5	15.4	
2 + 00	15.1	
2 + 02.5		
2 + 05		
2 + 07.5		
2 + 10		
2 + 12.5		
2 + 15		
2 + 17.5		
2 + 20		
2 + 22.5		
2 + 25		
2 + 27.5		
2 + 30		
2 + 32.5		
2 + 35		
2 + 37.5		
2 + 40		
2 + 42.5		
2 + 45		
2 + 47.5		
2 + 50		
2 + 52.5		
2 + 55		
2 + 57.5		
2 + 60		
2 + 62.5		
2 + 65		
2 + 67.5		

The Depths For Each Station Are Given In Feet.

TABLE 2 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date	
	91	
	16-Nov	18-Nov
17 - 90		13.4
17 - 92.5		12.9
17 - 95		12.8
17 - 97.5		12.5
18 - 00		13.0
18 - 02.5		12.6
18 - 05		12.8
18 - 07.5		12.6
18 - 10		12.3
18 - 12.5		13.5
18 - 15	13.6	
18 - 17.5	13.4	
18 - 20	13.3	
18 - 22.5	12.6	
18 - 25	13.1	
18 - 27.5	12.5	
18 - 30	12.2	
18 - 32.5	12.5	
18 - 35	13.0	
18 - 37.5	12.5	
18 - 40	12.3	
18 - 42.5	12.2	
18 - 45	12.8	
18 - 47.5	13.1	
18 - 50		13.1
18 - 52.5		13.8
18 - 55		14.2
18 - 57.5		14.6
18 - 60		14.1
18 - 62.5		13.8
18 - 65		13.2
18 - 67.5	12.8	
18 - 70	12.9	

Station	Date	
	91	
	16-Nov	
18 - 72.5	13.0	
18 - 75	13.4	
18 - 77.5	12.9	
18 - 80	13.0	
18 - 82.5	13.2	
18 - 85	13.0	
18 - 87.5	13.3	
18 - 90	13.8	
18 - 92.5	13.6	
18 - 95	13.0	
18 - 97.5	13.4	
19 - 00	13.2	
19 - 02.5	13.3	
19 - 05	13.0	
19 - 07.5	13.5	
19 - 10	13.2	
19 - 12.5	13.8	
19 - 15	14.0	
19 - 17.5	14.1	
19 - 20	14.0	
19 - 22.5	13.8	
19 - 25	13.5	
19 - 27.5	13.8	
19 - 30	13.9	
19 - 32.5	14.2	
19 - 35	14.5	
19 - 37.5	14.6	
19 - 40	14.6	
19 - 42.5	14.3	
19 - 45	14.4	
19 - 47.5	14.5	
19 - 50	14.6	

TABLE 2 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date '91			
	19-Nov	20-Nov	21-Nov	22-Nov
16 + 10				13.8
16 + 12.5				14.1
16 + 15				13.6
16 + 17.5				13.0
16 + 20			13.5	
16 + 22.5			13.0	
16 + 25			13.3	
16 + 27.5			13.0	
16 + 30			13.2	
16 + 32.5			13.0	
16 + 35			12.8	
16 + 37.5			13.3	
16 + 40			13.5	
16 + 42.5			12.8	
16 + 45			13.3	
16 + 47.5		13.0		
16 + 50		13.0		
16 + 52.5		13.6		
16 + 55		14.4		
16 + 57.5		14.5		
16 + 60		14.1		
16 + 62.5		14.4		
16 + 65		13.9		
16 + 67.5		12.6		
16 + 70		12.6		
16 + 72.5		13.8		
16 + 75		13.0		
16 + 77.5		13.4		
16 + 80		14.0		
16 + 82.5	13.8			
16 + 85	13.6			
16 + 87.5	14.0			
16 + 90	14.5			
16 + 92.5	12.0			
16 + 95	12.6			
16 + 97.5	12.3			

Station	Date '91		
	18-Nov	19-Nov	20-Nov
17 + 00		12.1	
17 + 02.5		12.6	
17 + 05		13.1	
17 + 07.5		13.3	
17 + 10		12.6	
17 + 12.5		11.8	
17 + 15			12.0
17 + 17.5			13.2
17 + 20			13.1
17 + 22.5			12.7
17 + 25			12.6
17 + 27.5			12.2
17 + 30			12.0
17 + 32.5			13.3
17 + 35			13.3
17 + 37.5			12.6
17 + 40			13.0
17 + 42.5			13.6
17 + 45			13.2
17 + 47.5			13.0
17 + 50	12.5		
17 + 52.5	11.8		
17 + 55	12.0		
17 + 57.5	12.2		
17 + 60	12.0		
17 + 62.5	12.3		
17 + 65	12.8		
17 + 67.5	13.0		
17 + 70	12.9		
17 + 72.5	13.1		
17 + 75	13.1		
17 + 77.5	13.0		
17 + 80	12.7		
17 + 82.5	13.0		
17 + 85	13.0		
17 + 87.5	12.6		

TABLE 2 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date 91	
	14-Nov	23-Nov
14 + 30		
14 + 32.5		
14 + 35		
14 + 37.5		
14 + 40		
14 + 42.5		
14 + 45		
14 + 47.5		
14 + 50		
14 + 52.5		
14 + 55		
14 + 57.5		
14 + 60		
14 + 62.5		
14 + 65	15.2	
14 + 67.5	15.2	
14 + 70	15.4	
14 + 72.5	14.2	
14 + 75	13.2	
14 + 77.5	13.2	
14 + 80	16.0	
14 + 82.5	14.8	
14 + 85	14.3	
14 + 87.5	13.3	
14 + 90	13.5	
14 + 92.5	14.2	
14 + 95	15.0	
14 + 97.5	15.2	
15 + 00	14.1	
15 + 02.5	15.2	
15 + 05	16.2	
15 + 07.5	16.0	
15 + 10	16.1	
15 + 12.5	15.8	
15 + 15		15.0
15 + 17.5		14.5

Station	Date 91		
	22-Nov	23-Nov	25-Nov
15 + 20		13.8	
15 + 22.5		12.9	
15 + 25		12.3	
15 + 27.5			12.1
15 + 30			12.3
15 + 32.5			13.3
15 + 35			12.3
15 + 37.5			12.6
15 + 40			12.8
15 + 42.5			13.5
15 + 45			14.1
15 + 47.5			13.4
15 + 50		13.0	
15 + 52.5		14.0	
15 + 55		14.0	
15 + 57.5		14.1	
15 + 60		13.6	
15 + 62.5		13.6	
15 + 65		12.4	
15 + 67.5		12.6	
15 + 70		13.7	
15 + 72.5	13.8		
15 + 75	13.4		
15 + 77.5	13.0		
15 + 80	13.3		
15 + 82.5	12.8		
15 + 85	13.0		
15 + 87.5	13.4		
15 + 90	13.2		
15 + 92.5	13.8		
15 + 95	13.4		
15 + 97.5	13.5		
16 + 00	13.7		
16 + 02.5	14.0		
16 + 05	14.8		
16 + 07.5	13.5		

TABLE 2 (continued)

SLURRY WALL EXCAVATION LOG

Station	Date '91	
	14-Nov	23-Nov
14 + 30		
14 + 32.5		
14 + 35		
14 + 37.5		
14 + 40		
14 + 42.5		
14 + 45		
14 + 47.5		
14 + 50		
14 + 52.5		
14 + 55		
14 + 57.5		
14 + 60		
14 + 62.5		
14 + 65	15.2	
14 + 67.5	15.2	
14 + 70	15.4	
14 + 72.5	14.2	
14 + 75	13.2	
14 + 77.5	13.2	
14 + 80	16.0	
14 + 82.5	14.8	
14 + 85	14.3	
14 + 87.5	13.3	
14 + 90	13.5	
14 + 92.5	14.2	
14 + 95	15.0	
14 + 97.5	15.2	
15 + 00	14.1	
15 + 02.5	15.2	
15 + 05	16.2	
15 + 07.5	16.0	
15 + 10	16.1	
15 + 12.5	15.8	
15 + 15		15.0
15 + 17.5		14.5

Station	Date '91		
	22-Nov	23-Nov	25-Nov
15 + 20		13.8	
15 + 22.5		12.9	
15 + 25		12.3	
15 + 27.5			12.1
15 + 30			12.8
15 + 32.5			13.3
15 + 35			12.8
15 + 37.5			12.6
15 + 40			12.8
15 + 42.5			13.5
15 + 45			14.1
15 + 47.5			13.4
15 + 50		13.0	
15 + 52.5		14.0	
15 + 55		14.0	
15 + 57.5		14.1	
15 + 60		13.6	
15 + 62.5		13.6	
15 + 65		12.4	
15 + 67.5		12.6	
15 + 70		13.7	
15 + 72.5	13.8		
15 + 75	13.4		
15 + 77.5	13.0		
15 + 80	13.3		
15 + 82.5	12.8		
15 + 85	13.0		
15 + 87.5	13.4		
15 + 90	13.2		
15 + 92.5	13.8		
15 + 95	13.4		
15 + 97.5	13.5		
16 + 00	13.7		
16 + 02.5	14.0		
16 + 05	14.8		
16 + 07.5	13.5		

TABLE NO 3

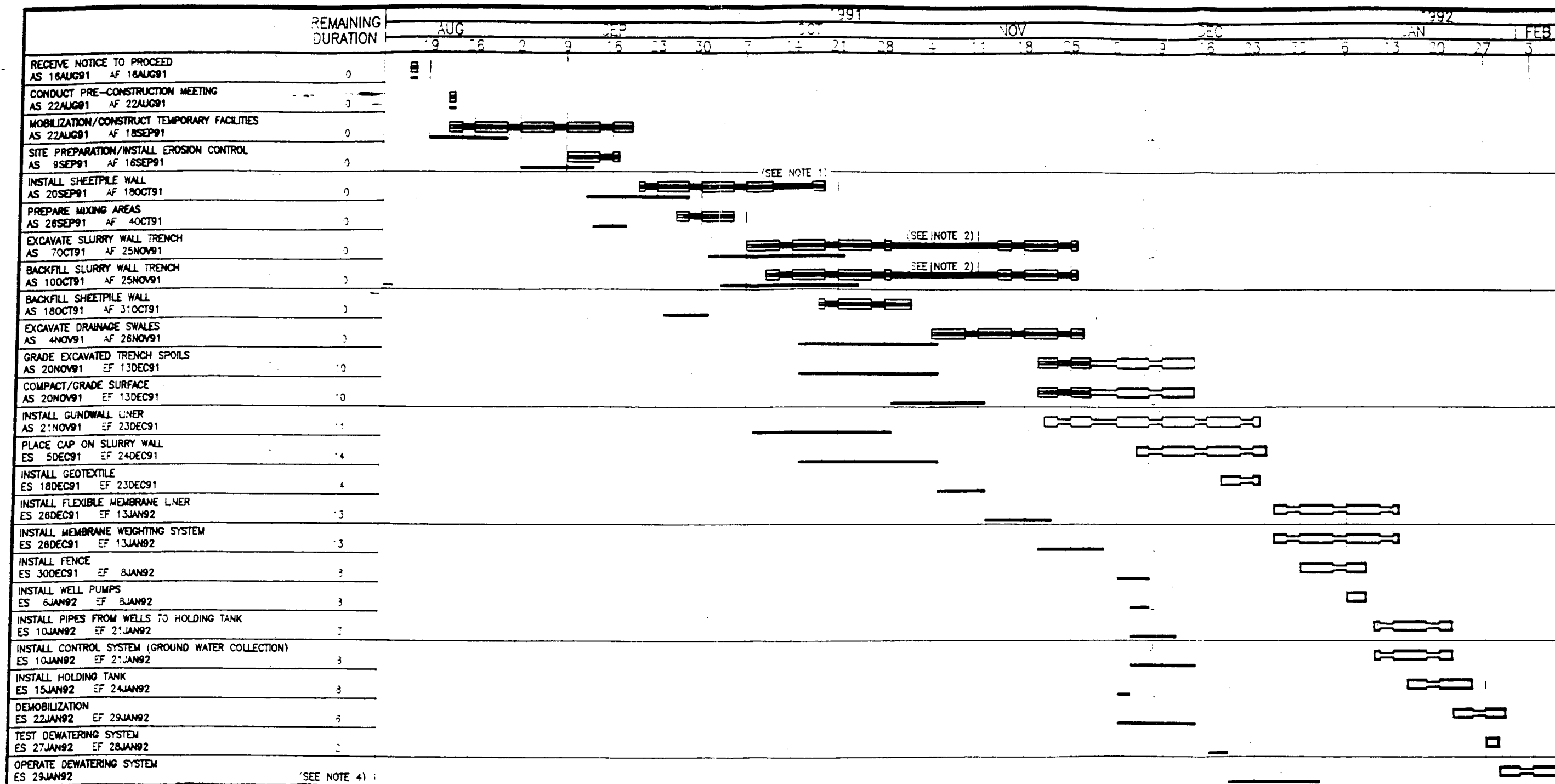
SUMMARY OF SOIL-BENTONITE PERMEABILITY TESTING

STATION NO.	SPEC. DATE	WATER CONTENTS	TOTAL UNIT WGT8	DRY UNIT WGT8.	STRESS	TIME OF CONSOL./ VOLUMETRIC STRAIN	PERMEANT/ INITIAL GRADIENT	COEFFICIENT OF PERM. K, (@ 20 C) cm/sec	REMARKS
		INITIAL/ POST CONSOL (%)	INITIAL/ POST CONSOL (PCF)	INITIAL/ POST CONSOL (PCF)	EFFECTIVE/ BACK PRESSURE PSI	DAYS/(%)			
1+90		29.4	116.2	89.8	5.0	1	WATER	1.4E-08	
		22.9	123.0	100.1	100.0	10.3	23		
4+00	14-Oct	25.3	124.8	99.6	5.0	1	WATER	2.4E-08	
		19.4	130.8	109.6	100.0	9.1	23		
6+00	17-Oct	22.6	127.6	104.1	5.0	1	WATER	3.4E-08	
		17.8	133.9	113.7	100.0	8.4	23		
8+00	21-Oct	21.1	129.9	107.3	5.0	1	WATER	4.2E-08	
		17.3	134.1	114.3	100.0	6.1	24		
10+00	25-Oct	21.2	125.4	103.5	5.0	1	WATER	2.0E-08	
		17.3	130.1	111.0	100.0	6.7	20		
12+00	28-Oct	20.3	130.0	108.0	5.0	1	WATER	2.4E-08	
		16.4	135.3	116.3	100.0	7.1	20		
14+00	30-Oct	18.3	133.3	112.7	5.0	1	WATER	2.2E-08	
		15.5	137.5	119.0	100.0	5.3	20		
0+50	18-Nov	8.3	123.5	114.0	5.0	1	WATER	4.7E-08	
		14.4	136.9	119.7	100.0	4.8	20		
18+00	20-Nov	18.7	133.7	112.6	5.0	1	WATER	6.3E-08	
		14.3	139.2	121.8	100.0	7.6	27		
16+00	26-Nov	16.8	140.0	119.8	5.0	1	WATER	6.3E-08	
		13.2	142.5	126.0	100.0	4.9	20		

TABLE NO 3

SUMMARY OF SOIL-BENTONITE PERMEABILITY TESTING

STATION NO.	SPEC. DATE	WATER CONTENTS	TOTAL UNIT WGT8	DRY UNIT WGT8.	STRESS	TIME OF CONSOL/	PERMEANT/	COEFFICIENT OF PERM. K, (@ 20 C)	REMARKS
		INITIAL/ POST CONSOL (%)	INITIAL/ POST CONSOL (PCF)	INITIAL/ POST CONSOL (PCF)	EFFECTIVE/ BACK PRESSURE PSI	VOLUMETRIC STRAIN DAYS/(%)	INITIAL GRADIENT	cm/sec	
1+90		29.4	116.2	89.8	5.0	1	WATER	1.4E-08	
		22.9	123.0	100.1	100.0	10.3	23		
4+00	14-Oct	25.3	124.8	99.6	5.0	1	WATER	2.4E-08	
		19.4	130.8	109.6	100.0	9.1	23		
6+00	17-Oct	22.6	127.6	104.1	5.0	1	WATER	3.4E-08	
		17.8	133.9	113.7	100.0	8.4	23		
8+00	21-Oct	21.1	129.9	107.3	5.0	1	WATER	4.2E-08	
		17.3	134.1	114.3	100.0	6.1	24		
10+00	25-Oct	21.2	125.4	103.5	5.0	1	WATER	2.0E-08	
		17.3	130.1	111.0	100.0	6.7	20		
12+00	28-Oct	20.3	130.0	108.0	5.0	1	WATER	2.4E-08	
		16.4	135.3	116.3	100.0	7.1	20		
14+00	30-Oct	18.3	133.3	112.7	5.0	1	WATER	2.2E-08	
		15.5	137.5	119.0	100.0	5.3	20		
0+50	18-Nov	8.3	123.5	114.0	5.0	1	WATER	4.7E-08	
		14.4	136.9	119.7	100.0	4.8	20		
18+00	20-Nov	18.7	133.7	112.6	5.0	1	WATER	6.3E-08	
		14.3	139.2	121.8	100.0	7.6	27		
16+00	26-Nov	16.8	140.0	119.8	5.0	1	WATER	6.3E-08	
		13.2	142.5	126.0	100.0	4.9	20		

DRAWING
NUMBER 90-198-B72**NOTES:**

1. WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM ALONG PEACH ISLAND CREEK.
2. WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND DEFLECTED SHEETPILE PROBLEM.
3. GEOTEXTILE AND FML INSTALLATION SCHEDULE MAY BE IMPACTED BY WEATHER DELAYS IN PREPARATION OF THE SUBGRADE.
4. THE DEWATERING OPERATION WILL CONTINUE ON AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

LEGEND:

- ACTIVITY BAR
CRITICAL ACTIVITY
PROGRESS BAR
TARGET DATES

NOVEMBER PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR

COOPERATING PRP GROUP

Canonie Environmental

8-18-91	REVISED FOR DELAY IN NOTICE TO PROCEED WITH CONSTRUCTION	WLN	J.R.	F.J.G.
12-1-91	UPDATED 12-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.R.	M.K.L.	J.E.M.
11-6-91	UPDATED 11-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.R.	M.K.L.	J.E.M.
10-4-91	UPDATED 10-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WLN	M.K.L.	J.E.M.
No.	DATE	ISSUE / REVISION	DRAWN BY / CHECKED BY / APPROVED BY	

DATE: 8-14-91
SCALE: NONE

FIGURE 1

DRAWING NUMBER
90-198-B72

MEMO

To: Joseph Mihm

90-198

From: Peter Porter

January 9, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
DECEMBER 1991
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the quality assurance/quality control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period from December 1, 1991 through December 31, 1991 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for January 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - Significant QA/QC Concerns & Recommended Solutions;
- o Section 6.0 - Status of Solutions to QA/QC Concerns.

2.0 - Work Completed

During the period from December 1, 1991 through December 31, 1991, Canonie completed the work as outlined in the following sections:

CanonieEnvironmental

Joseph Mihm

2

December 5, 1991

- o Section 2.1 - Site Grading;
- o Section 2.2 - EPA Sampling Activity for Foster-Wheeler;
- o Section 2.3 - Anchor Trench Excavation;
- o Section 2.4 - Vertical Flexible Membrane Liner (FML) Installation;
- o Section 2.5 - Well and Piezometer Inspection;
- o Section 2.6 - Decommissioning Staging Area;
- o Section 2.7 - Gabion Baskets;
- o Section 2.8 - As-Built;
- o Section 2.9 - Demobilization.

2.1 - Site Grading

No specific QA/QC testing was required for this activity. Canonie continued site grading activities using trench spoils in accordance with approved Modification # 14. Canonie incurred problems with the site grading activities due to the adverse weather conditions. The weather has continually plagued this activity, leaving the subgrade difficult to impossible to place to final grade. Canonie will continue to attempt grading activities wherever possible. As-built will be surveyed by a licensed surveyor when grading activities have been completed.

Joseph E. Mihm

3

January 9, 1992

2.2 - EPA Sampling Activity

Canonie cooperated with the Foster-Wheeler sampling team working at the site on behalf of the EPA by supplying a CAT 235 excavator and operator, a Health and Safety officer, air monitoring instruments, and union laborers as needed. The duration of the sampling activity was longer than originally estimated by the EPA and required Canonie to expend more time and effort aiding the sampling team with equipment and labor until the activity was completed.

2.3 - Anchor Trench Excavation

The anchor trench excavation was visually reviewed and dimensions were measured by Canonie personnel to ensure that the work was being performed in accordance with the Technical Specifications and Construction Drawings. Canonie intends to utilize some of the staging area stone for backfilling the anchor trench after the infiltration barrier is installed and is currently preparing a modification for approval.

2.4 - Vertical FML Installation

The vertical FML installation required specific QA/QC testing and inspection to satisfy the criteria stated in Section 02215 of the Technical Specifications and subsequent modification requests. These modification requests included:

- o Utilizing Hydrotite "T" type in place of "K" type (Mod. 13);
- o Utilizing a looped HDPE bottom anchor (Mod. 16);
- o Utilizing additional anchor sections on sheets (Mod. 19);

CanonieEnvironmental

Joseph E. Mihm

4

January 9, 1992

The QA/QC testing and inspections included the following;

- o Testing a sample of each coil of Hydrotite, which must possess properties in accordance with approved Modification Number 13, which states that the Hydrotite must expand 1.2 to 1.5 times its diameter when immersed in a slurry sample for 72 hours.
- o Testing the interlocks for continuity between each panel by inserting a runner attached to a string ahead of each panel prior to installation. Continuity was assured if the length of string used matched the length of the installed panel.
- o Testing the continuity of the Hydrotite by cutting the Hydrotite to the length of each sheet. The Hydrotite had to equal the length of each panel with reasonable allowance for expansion of the hydrotite.

Canonie personnel visually reviewed the panels to ensure that they met the criteria given in Section 02215 of the Technical Specifications. During installation, the placement was visually reviewed to ensure the horizontal position was within one foot of center with less than 3 percent deviation from vertical. Table 1 contains the Hydrotite expansion data and indicates that all samples expanded between 1.2 and 1.5 times the sample's original diameter. Canonie personnel reviewed the vertical FML installation, interlock continuity and Hydrotite continuity to ensure that the above criteria were being met.

Several QA/QC problems were encountered during the installation of the FML panels:

- o The Hydrotite was found to stretch during insertion, thereby reducing its diameter;

CanonieEnvironmental

100681

Joseph E. Mihm

5

January 9, 1992

- o Questions arose about using Wesson oil as a lubricant because it might reduce the ability of the Hydrotite to swell;
- o Modifications to the insertion plate were necessary to prevent the plate from pulling the installed sheet back out;
- o Sections of Hydrotite broke off below the ground surface.

These significant QA/QC problems plus an evaluation of the remedies for removing deflections in the sheet pile wall discovered in November, are outlined in Section 5.0.

2.5 - Well and Piezometer Inspection

On December 17, 1991, an inspection of the damaged monitoring wells and piezometers was conducted by Linda Welkom and Pam Lange (NJDEPE), Pat Evangelista (EPA), Mark Seel (Langan), Don Wendt (ICF Kaiser) and Pete Porter (Canonie). The following monitoring wells and piezometers were inspected with these observations:

- o MW-6S, a dewatering well, appears to be broken off at or above the well screen. The well screen appears to be undisturbed. Sounding revealed that there are some sediments in the bottom of the well. The initial investigation concluded that the monitoring/dewatering well will probably have to be replaced, but further investigation may warrant repairs instead;
- o MW-1S, a dewatering well, appears to be broken off at or above the threads on the well screen. The well screen appears to be undisturbed. Sounding revealed that there are some sediments in the bottom of the well. Initial investigation concluded that the monitoring/dewatering well

Joseph E. Mihm

6

January 9, 1992

may need to be replaced, but further investigation may warrant repair instead;

- o Piezometer P-14 appears to be in good condition below the break. Sounding revealed little or no sediment present at the bottom. Repair is possible by placing a slip coupling on the inner casing to raise the piezometer and by replacing the protective casing;
- o Piezometer P-8 is bent over and the 2 inch polyvinyl chloride (PVC) inner casing is stressed. Sounding revealed little or no sediment present at the bottom. Repairs can be made by removing the damaged protective casing, cutting the PVC if it is not broken below the stressed area, using a PVC slip coupling and pipe section to raise the piezometer and replacing with a new section of protective casing;
- o Piezometer P-9 appears to be in good condition below the break. Sounding revealed little or no sediment present at the bottom. Repairs can be made by unscrewing the section of PVC located just below ground surface, threading on a new section of pipe, and then placing a new section of protective casing.

Following the field investigation, the decision was made by the NJDEPE and the EPA to replace monitoring/dewatering wells MW-1S and MW-6S without further investigation. The piezometers are to be repaired as described above.

2.6 - Decommissioning Staging Area

No specific QA/QC testing was required for this activity. However, Canonie visually reviewed the decommissioning of the staging area to ensure that the work was performed to maintain the remainder of the staging area in accordance with the

Joseph E. Mihm

7

January 9, 1992

Technical Specifications Section 01500 Temporary Controls & Construction Facilities, Section 01505 Mobilization, and Section 02200 Earthwork. The staging area will be decommissioned as needed for site grading activities.

2.7 - Gabion Baskets

Six notches were placed in the sheet pile wall to direct surface runoff from the site into Peach Island Creek. To dissipate the energy from the falling water, gabion baskets were placed on the ground beneath each notch. Each basket was 6 foot by 6 foot by 1 foot high filled with 6-inch stone. No specific QA/QC testing was required for this activity except for the submission of gradation test results from the quarry. However, Canonie visually reviewed the construction and placement of gabion baskets to ensure that the work was completed in accordance with the Technical Specifications and Construction Drawings. This work was completed on December 5, 1991.

2.8 - As-Built

The following As-Built were completed in December:

- o Slurry wall width, alignment, and final elevation prior to installation of the infiltration barrier;
- o Vertical FML alignment and top elevation from station 5 + 10 to station 18 + 00.

Final As-Built will be surveyed by a New Jersey State licensed surveyor.

100684

Joseph E. Mihm

8

January 9, 1992

2.9 - Demobilization

Upon completion of the slurry wall and other construction activities, Canonie started to demobilize materials and equipment no longer required at the site.

3.0 - Work Scheduled for January 1992

The work items scheduled for the month of January 1992 include the following:

- o Continuation of site grading as weather permits;
- o Restoration of deflected sections of sheet pile wall;
- o Installation of the slurry wall FML;
- o Construction of the slurry wall cap;
- o Excavation of the infiltration barrier anchor trench;
- o Initiation of placement of the infiltration barrier;
- o Continuation of demobilization activities.

4.0 - Changes to Project Schedule

At this time, the project is behind schedule by approximately two months. Canonie anticipates that the completion date will slip to approximately the end of February. Figure 1 shows the updated progress schedule (revision 8).

100685

CanonieEnvironmental

Joseph E. Mihm

9

January 9, 1992

5.0 - QA/QC Concerns and Recommended Solutions

A QA/QC concern was encountered while testing the continuity of the Hydrotite. The Hydrotite was found to stretch during the installation of each panel. A calculation package will be submitted to Langan Environmental Services, Inc. (Langan) showing that the expansion of the Hydrotite is sufficient to properly seal the interlocks after stretching.

Initial installation of the vertical liner into the center of the slurry wall was halted due to installation problems and forced Canonie to modify the insertion plate and some of the initial panels. Canonie considered several remedies to prevent the insertion plate from adhering to the FML panel, and decided to modify the insertion plate by cutting slots, which eliminated surface area to which the FML sheets would stick. The initial FML panels were modified by welding additional anchors to each panel and a section of Gundlock to the inside of each panel to act as a spacer between the panel and the insertion plate. These modifications to the insertion plate and initial FML panels proved successful and allowed Canonie to successfully install the vertical FML from approximately station 5 + 10 to 17 + 10 (200 panels).

The use of Wesson oil as a lubricant to reduce the amount of friction within the interlock was questioned by Langan as to whether or not the Wesson oil would affect the expansion capabilities of the Hydrotite. Tests were run on the hydrotite verifying that the use of Wesson oil as a lubricant does not affect the expansion properties. These results will also be submitted to Langan.

During installation of the vertical FML, several sections of the Hydrotite broke off below the ground surface. Canonie contacted their subcontractor and resolved the issue immediately by determining that installation of a 5mm Hydrotite into the interlocks lacking Hydrotite would sufficiently seal the interlock. Test results verifying the adequacy of the 5mm Hydrotite swelling results will be submitted to Langan.

Joseph E. Mihm

10

January 9, 1992

On December 20, 1991, Canonie submitted Modification Number 18, which addressed the restoration of the sheet pile wall (Sheets 155 to 170 and Sheets 181 to 191). The submitted procedure involved excavating the backfill next to the wall, pulling the wall vertical to within the specified plumbness, placing stone on the creek side of the wall below the creek bottom, and replacing the backfill along the wall. Canonie is waiting to receive approval for these plans from the NJDEPE, Division of Coastal Resources.

6.0 - Status of Solutions to QA/QC Concerns

The modifications made to the insertion plate and the initial FML panels proved successful. An advisory modification to Modification Number 16 will be submitted describing the changes to each panel.

PFP/jc

Attachments

cc: Mark Seel, Langan
Curt DeWolf, Canonie
Frank Gontowski, Canonie
Jim Semple, Canonie

100687

TABLE 1

HYDROTITE QA/QC EXPANSION DATA

SAMPLE ID #	INITIAL DIAMETER (mm)	FINAL DIAMETER (mm)	EXPANSION FACTOR
CE- 1	6.4	8.9	1.39
CE- 2	6.7	8.6	1.28
CE- 3	6.6	8.6	1.30
CE- 4	6.6	8.5	1.29
CE- 5	6.2	8.2	1.32
CE- 6	6.2	8.2	1.32
CE- 7	6.6	8.7	1.32
CE- 8	6.6	8.9	1.35
CE- 9	6.5	8.8	1.35
CE- 10	6.5	8.9	1.37
CE- 11	6.6	9	1.36
CE- 12	6.4	8.8	1.38
CE- 13	6.5	8.9	1.37
CE- 14	6.6	8.8	1.33
CE- 15	6.1	8.9	1.46
CE- 16	6.6	8	1.21
CE- 17	6.2	8.8	1.42
CE- 18	6.2	8.4	1.35
CE- 19	6.5	8.7	1.34
CE- 20	6.1	8.3	1.36
CE- 21	6.9	9.5	1.38
CE- 22	6.1	8.3	1.36
CE- 23	6.1	8.3	1.36
CE- 24	5.9	8.6	1.46
CE- 25	6.6	9.2	1.39
CE- 26	6.2	8.4	1.35
CE- 27	6.4	8.6	1.34
CE- 28	6.4	8.6	1.34
CE- 29	6.5	8.6	1.32
CE- 30	6.4	8.7	1.36
CE- 31	6.4	8.6	1.34
CE- 32	5.9	8.1	1.37
CE- 33	6.3	8.5	1.35
CE- 34	6	8.1	1.35
CE- 35	6.4	8.6	1.34
CE- 36	6.4	8.7	1.36
CE- 37	6.5	8.7	1.34
CE- 38	6.4	8.8	1.38
CE- 39	6.3	8.4	1.33
CE- 40	6.3	8.5	1.35
CE- 41	6.3	8.4	1.33
CE- 42	6.5	8.6	1.32
CE- 43	6.4	8.6	1.34

TABLE 1 (continued)

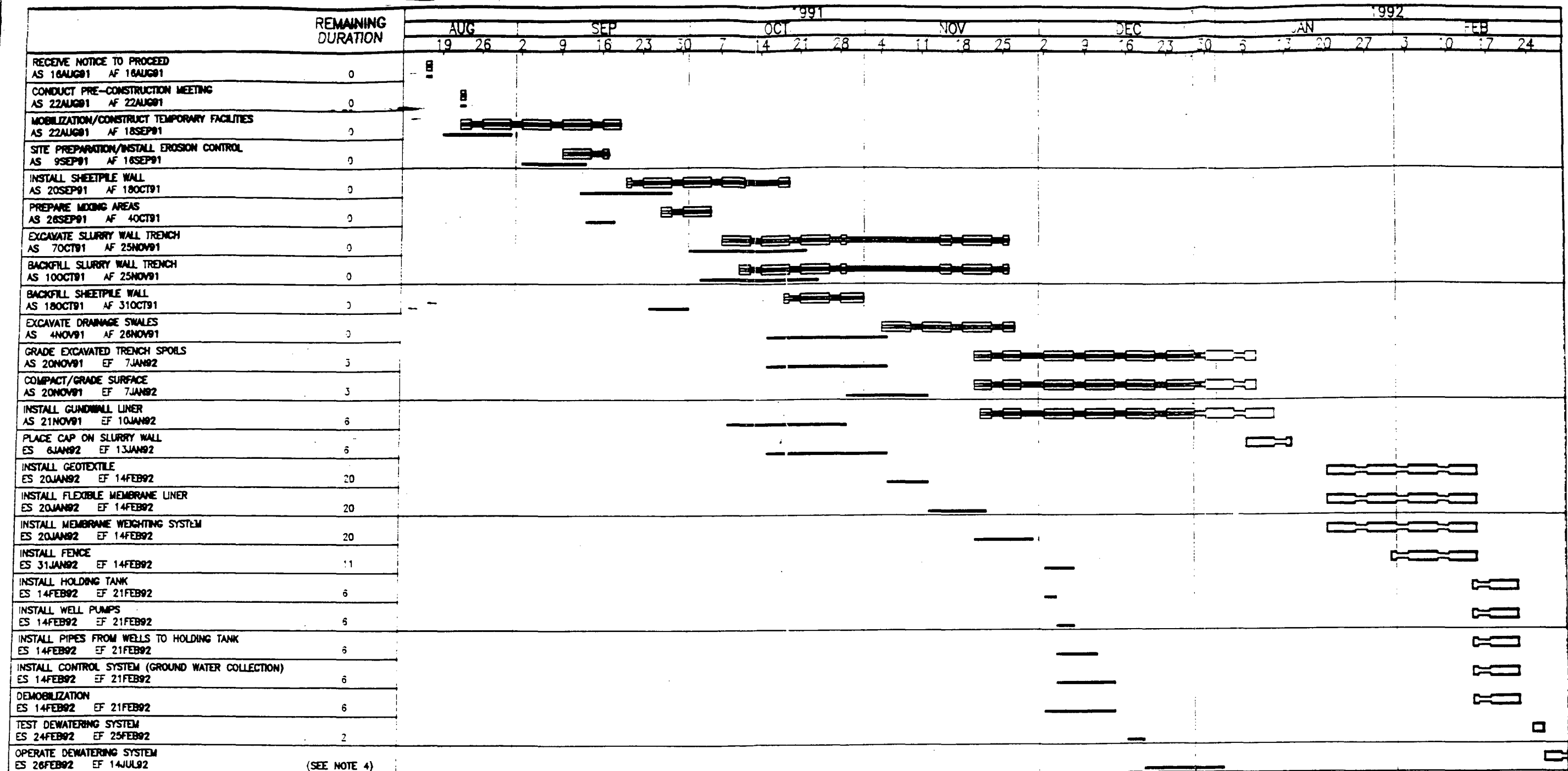
HYDROTITE QA/QC EXPANSION DATA

SAMPLE ID #	INITIAL DIAMETER (mm)	FINAL DIAMETER (mm)	EXPANSION FACTOR
CE- 44	6.6	8.8	1.33
CE- 45	6.3	8.2	1.30
CE- 46	6.3	8.4	1.33
CE- 47	6.4	8.6	1.34
CE- 48	6.6	8.9	1.35
CE- 49	6.3	8.6	1.37
CE- 50	6.6	8.8	1.33
CE- 51	6.2	8.3	1.34
CE- 52	6.6	9	1.36
CE- 53	6.5	8.9	1.37
CE- 54	6.5	8.8	1.35
CE- 55	6.5	8.9	1.37
CE- 56	6.6	9	1.36
CE- 57	6.3	8.9	1.41
CE- 58	6.4	8.5	1.33
CE- 59	6.4	8.7	1.36
CE- 60	6.6	8.9	1.35
CE- 61	6.6	8.8	1.33
CE- 62	6.3	8.9	1.41
CE- 63	6.5	8.7	1.34
CE- 64	6.5	8.8	1.35
CE- 65	5.9	8.1	1.37
CE- 66	6.4	8.5	1.33
CE- 67	6	8.2	1.37
CE- 68	6.4	8.7	1.36
CE- 69	6.4	8.6	1.34
CE- 70	6.5	8.9	1.37
CE- 71	6.5	8.9	1.37
CE- 72	6.6	9.1	1.38
CE- 73	6.6	9	1.36
CE- 74	6.6	9.1	1.38
CE- 75	6.6	9	1.36
CE- 76	6.5	9	1.38
CE- 77	6.5	9	1.38
CE- 78	6.4	8.9	1.39
CE- 79	6.7	9	1.34
CE- 80	6.5	8.5	1.31
CE- 81	6.4	8.6	1.34
CE- 82	6.6	8.8	1.33
CE- 83	6.3	8.3	1.32
CE- 84	6.3	8.4	1.33
CE- 85	6	8.1	1.35
CE- 86	6.2	8.3	1.34

TABLE 1 (continued)





HYDROTITE QA/QC EXPANSION DATA

SAMPLE ID #	INITIAL DIAMETER (mm)	FINAL DIAMETER (mm)	EXPANSION FACTOR
CE- 87	6.2	8.2	1.32
CE- 88	6.1	8.2	1.34
CE- 89	6.3	8.4	1.33
CE- 90	6.3	8.4	1.33
CE- 91	6	8.1	1.35
CE- 92	6.5	8.6	1.32
CE- 93	6.2	8.3	1.34
CE- 94	6.5	8.6	1.32
CE- 95	6.2	8.3	1.34
CE- 96	6.2	8.3	1.34
CE- 97	6.7	8.8	1.31
CE- 98	6.7	8.8	1.31
CE- 99	6.6	8.9	1.35
CE- 100	6.3	8.2	1.30
CE- 101	6.2	8.3	1.34
CE- 102	6.2	8.3	1.34
CE- 103	6.1	8.2	1.34
CE- 104	6.5	8.8	1.35
CE- 105	6.5	8.7	1.34
CE- 106	6.5	8.9	1.37
CE- 107	6	8.2	1.37
CE- 108	6.3	8.2	1.30
CE- 109	6.6	8.9	1.35
CE- 110	6	8.2	1.37
CE- 111	6.1	8.1	1.33
CE- 112	6.1	8.3	1.36
CE- 113	6.5	8.2	1.26

DRAWING
NUMBER 90-198-B72**NOTES:**

- WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM ALONG PEACH ISLAND CREEK.
- WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND DEFLECTED SHEETPILE PROBLEM.
- GEOTEXTILE AND FML INSTALLATION SCHEDULE MAY BE IMPACTED BY WEATHER DELAYS IN PREPERATION OF THE SUBGRADE.
- THE DEWATERING OPERATION WILL CONTINUE ON AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

LEGEND:

-  ACTIVITY BAR
 CRITICAL ACTIVITY
 PROGRESS BAR
 TARGET DATES

DECEMBER PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY.

PREPARED FOR
COOPERATING PRP GROUP

CanonieEnvironmental

DATE: 8-14-91
SCALE: NONE

FIGURE 1

DRAWING NUMBER
90-198-B72

△	1/7/92	UPDATED 12-28-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.M.R.	M.L.	J.S.
△	12-4-91	UPDATED 12-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.R.	J.R.	J.E.M.
△	11-8-91	UPDATED 11-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.P.R.	M.K.I.	J.E.M.
△	10-4-91	UPDATED 10-1-91 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	W.L.	M.K.I.	J.E.M.
No.	DATE	ISSUE / REVISION	OWN. SIGNED SHOWN BY		

MEMO

To: Joseph Mihm

90-198

From: Peter Porter

February 3, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
JANUARY 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the quality assurance/quality control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period from January 1, 1992 through January 31, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for February 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - QA/QC Concerns and Recommended Solutions;
- o Section 6.0 - Status of Solutions to QA/QC Concerns.

2.0 - Work Completed

During the period from January 1, 1992 through January 31, 1992, Canonie completed the work as outlined in the following sections:

100692

Joseph Mihm

2

February 3, 1992

- o Section 2.1 - Site Grading;
- o Section 2.2 - Sheet Pile Restoration;
- o Section 2.3 - Anchor Trench Excavation;
- o Section 2.4 - Vertical Liner Installation;
- o Section 2.5 - Well and Piezometer Activities;
- o Section 2.6 - Decommissioning Staging Area;
- o Section 2.7 - As-Built Surveying;
- o Section 2.8 - Demobilization.

2.1 - Site Grading

No specific QA/QC testing is required for this activity. Canonie continued site grading activities in accordance with approved Modification Number 14. Grading is being performed using slurry wall trench spoils and other site materials. Canonie has incurred problems with site grading activities due to the adverse weather conditions encountered during the winter months. The weather has continually plagued this activity leaving the subgrade difficult to impossible to grade. Canonie will continue to attempt grading activities wherever possible. As-builts will be completed by a licensed surveyor when grading activities have been completed.

2.2 - Sheet Pile Restoration

100693

Joseph Mihm

3

February 3, 1992

Canonie received approval for Modification Number 18 and proceeded with the Sheet pile restoration for sheets 155 to 170 and sheets 181 to 191 on January 15, 1992. Prior to the initiation of the sheet pile restoration, Langan Environmental Services, Inc. (Langan) expressed concern about an additional section of the sheet pile wall (Sheets 49 to 57) that appeared to have also deflected outward. Canonie investigated this concern and verified through pictures that this area of the sheet pile wall (Sheets 49 to 57) had deflected out during the slurry wall excavation and may have deflected further during the Gundwall installation. To restore this and the other deflected sections of the sheet pile wall, Canonie received approval to install H-piles in the pockets of the deflected sheets along the Peach Island Creek side. This work was performed according to the procedure outlined in the December 20, 1991 letter from Canonie to the NJDEPE, Division of Coastal Resources. The work on the deflected sheet pile wall sections was completed on January 17, 1992.

2.3 - Anchor Trench Excavation

No specific QA/QC testing was required for this activity. However, the anchor trench excavation was visually reviewed and dimensions were measured by Canonie personnel to ensure that the work was being performed in accordance with the Technical Specifications and Construction Drawings. Canonie intends to utilize some of the staging area stone for backfilling the anchor trench after the infiltration barrier is installed and is currently preparing a modification for approval.

2.4 - Vertical Flexible Membrane Liner (FML) Installation

The vertical FML installation required specific QA/QC testing and inspection to satisfy the criteria stated in Section 02215 of the Technical Specifications and subsequent modification requests. These modification requests included:

100694

Joseph Mihm

4

February 3, 1992

- o Utilizing Hydrotite "T" type in place of "K" type (Mod. 13);
- o Utilizing a looped HDPE bottom anchor (Mod. 16);
- o Utilizing additional anchor sections on sheets (Mod. 19);

The QA/QC testing and inspections included the following:

- o Testing a sample of each coil of Hydrotite, which must possess properties in accordance with approved Modification Number 13, which states that the Hydrotite must expand 1.2 to 1.5 times its diameter when immersed in a slurry sample for 72 hours;
- o Testing interlocks for continuity between each panel by inserting a runner attached to a string ahead of each panel prior to installation. Continuity was assured if the length of string used matched the length of the installed panel;
- o Testing the continuity of the Hydrotite by cutting the Hydrotite to the length of each sheet. The Hydrotite had to equal the length of each panel with reasonable allowance for expansion of the hydrotite.

Canonie personnel visually reviewed the panels to ensure that they met the criteria given in Section 02215 of the Technical Specifications. During installation, the placement was visually reviewed to ensure the horizontal position was within one foot of center with less than 3 percent deviation from vertical. Interlock continuity and Hydrotite continuity were reviewed using the procedures noted above. Canonie completed driving the vertical FML on January 10, 1992. After completing the installation of the vertical FML, Canonie visually reviewed every sheet with their

Joseph Mihm

5

February 3, 1992

subcontractor and installed the 5mm Hydrotite wherever the Hydrotite did not completely fill the interlock. The following vertical FML QA/QC data is included with this report:

- o Vertical panel embedment depth (Table 1);
- o Wesson Oil swelling results (Table 2);
- o Panels requiring 5 mm Hydrotite (Table 3);
- o 5 mm Hydrotite swelling results (Table 4);
- o Hydrotite "stretching" calculations (Attachment 1).

2.5 - Well and Piezometer Activities

On January 15, 16, and 17, 1992 Canonie performed all of the well and piezometer work related to Modification Number 12. On January 27 and 28, 1992 Canonie replaced monitoring/dewatering wells MW-1S and MW-6S with MW-1SR and MW-6SR. Canonie also replaced piezometer P-9 with P-9R. The original wells and piezometers were abandoned following installation of the replacements. All well and piezometer work was completed by a New Jersey State Licensed well driller. See Attachment 2 for modification and construction details for work performed on the monitoring wells and piezometers.

2.6 - Decommissioning Staging Area

No specific QA/QC testing was required for this activity. However, Canonie is visually reviewing the decommissioning of the staging area to ensure that the work was being

Joseph Mihm

6

February 3, 1992

performed to maintain the remainder of the staging area in accordance with the Technical Specifications. The staging area will be decommissioned as needed for site grading activities.

100697

Canon Environmental

Joseph Mihm

7

February 3, 1992

2.7 - As-Built Surveying

The following as-built surveying was completed in January:

- o Vertical FML alignment, and top elevation from station 18 + 10 to station 5 + 00;
- o Sheet pile alignment.

All survey work was performed by a licensed New Jersey surveyor from Taylor Wiseman and Taylor.

2.8 - Demobilization

Canonie continued demobilization activities whenever possible. Canonie increased demobilization efforts at the end January with the intent of implementing a temporary demobilization due to the weather related site conditions.

3.0 - Work Scheduled for February 1992

The work items scheduled for the month of February 1992 include the following:

- o Continuation of site grading;
- o Demobilization;
- o Temporary shutdown.

Joseph Mihm

8

February 3, 1992

4.0 - Changes to Project Schedule

At this time, the project is behind schedule by approximately two months and will continue to slip as the winter months progress. Canonie anticipates that a temporary shut down of site activities will occur until there is an improvement in the weather related site conditions. There is no revision currently available for the updated construction schedule.

5.0 - QA/QC Concerns and Recommended Solutions

A QA/QC concern was encountered while testing the continuity of the Hydrotite in the Gundwall interlocks. The Hydrotite was found to stretch during the installation of each panel. A calculation package was submitted to Langan showing that the expansion of the Hydrotite is sufficient to properly seal the interlocks after stretching. (Attachment 1).

The use of Wesson oil as lubricant to reduce the amount of friction within the interlock was questioned by Langan as to whether or not the Wesson oil would affect the expansion capabilities of the Hydrotite. Tests were run on the Hydrotite verifying that the use of Wesson oil as a lubricant does not affect the expansion of the Hydrotite. These results were also submitted to Langan and are included with this report.

During installation of the vertical FML, several sections of the hydrotite broke off below the ground surface. Canonie contacted their subcontractor and resolved the issue immediately by determining that the installation of a 5mm Hydrotite into the interlocks lacking Hydrotite would sufficiently seal the interlock. Test results² verifying the 5mm Hydrotite swelling results were submitted to Langan and are included with this report.

100699

Joseph Mihm

9

February 3, 1992

On December 20, 1991, Canonie submitted Modification Number 18, which addressed the restoration of the sheet pile wall (Sheets 155 to 170 & Sheets 181 to 191). Approval to install H-piling on the creek side at the location of these deflections, plus the other deflection discovered at Sheets 49 to 57, was received on January 15, 1992 and work was completed on the sheet pile wall by January 17, 1992.

Due to delays at the start of the project and further delays since, the winter weather has severely affected the ability of Canonie to achieve final grade along with a stable subgrade which is required prior to installation of the infiltration barrier.

6.0 - Status of Solutions to QA/QC Concerns

The sheet pile restoration activities were completed in accordance with Modification Number 18 in the following areas:

- o Sheets 49 to 57;
- o Sheets 155 to 170;
- o Sheets 181 to 191.

Joseph Mihm

10

February 3, 1992

Installation of the vertical FML was finished after completion of the FML from station 18 + 10 to 5 + 00.

PFP/jc

Attachments

cc: Mark Seel, Langan
Curt DeWolf, Canonie
Frank Gontowski, Canonie
Jim Semple, Canonie

TABLE 1
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
1	3	16	2.67	13.33
2	2	16	2.00	14.00
3	2	16	1.50	14.50
4	1	18	2.25	15.75
5	1	20	3.17	16.83
6	1	20	2.17	17.83
7	1	18	1.50	16.50
8	1	18	1.33	16.67
9	1	18	2.00	16.00
10	1	18	2.33	15.67
11	1	18	2.00	16.00
12	1	18	1.75	16.25
13	1	18	1.50	16.50
14	1	18	1.25	16.75
15	1	18	1.58	16.42
16	1	18	1.50	16.50
17	1	18	2.50	15.50
18	1	18	2.33	15.67
19	1	18	2.00	16.00
20	1	20	1.67	18.33
21	1	20	1.67	18.33
22	1	20	1.25	18.75
23	1	20	1.50	18.50
24	1	20	2.25	17.75
25	1	20	1.83	18.17
26	1	18	0.83	17.17
27	1	18	1.33	16.67
28	1	18	1.83	16.17
29	1	18	1.83	16.17
30	1	18	2.17	15.83
31	1	18	1.17	16.83
32	1	18	1.17	16.83
33	1	18	1.17	16.83
34	1	18	2.00	16.00
35	1	18	1.83	16.17
36	1	18	1.67	16.33
37	1	18	1.67	16.33
38	1	18	2.17	15.83
39	1	18	1.17	16.83
40	1	18	2.00	16.00
41	1	18	1.00	17.00
42	1	20	2.67	17.33
43	1	20	1.00	19.00
44	1	20	2.00	18.00

Total length (ft) = 729.83

Square footage (sqft) = 4379.00

TABLE 1 (continued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
45	1	20	1.50	18.50
46	1	20	1.50	18.50
47	1	20	1.50	18.50
48	1	20	2.00	18.00
49	1	20	1.33	18.67
50	1	20	1.50	18.50
51	1	20	1.83	18.17
52	1	20	2.17	17.83
53	1	20	1.33	18.67
54	1	18	1.83	16.17
55	1	18	1.17	16.83
56	1	18	1.33	16.67
57	1	18	1.42	16.58
58	1	18	1.08	16.92
59	1	18	1.75	16.25
60	1	18	1.92	16.08
61	0	20	1.50	18.50
62	1	20	2.00	18.00
63	1	20	1.83	18.17
64	1	20	1.58	18.42
65	1	20	1.33	18.67
66	1	20	2.08	17.92
67	1	20	1.67	18.33
68	1	20	1.00	19.00
69	1	20	0.83	19.17
70	1	20	1.33	18.67
71	1	20	1.33	18.67
72	1	20	1.33	18.67
73	1	18	1.50	16.50
74	1	18	1.00	17.00
75	1	18	1.50	16.50
76	1	18	1.33	16.67
77	1	18	1.33	16.67
78	1	18	1.50	16.50
79	0	20	2.00	18.00
80	0	20	1.83	18.17
81	0	20	2.17	17.83
82	0	20	2.00	18.00
83	0	20	2.00	18.00
84	0	20	1.17	18.83
85	0	20	1.33	18.67
86	0	20	1.00	19.00
87	1	20	1.67	18.33
88	1	20	1.17	18.83

100703

Total length (ft) = 788.50

Square footage (sqft) = 4719.00

TABLE 1 (continued)
 SCP CARLSTADT SUPERFUND PROJECT
 Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
89	1	20	0.83	19.17
90	1	20	1.50	18.50
91	1	20	1.83	18.17
92	1	20	1.50	18.50
93	1	20	2.17	17.83
94	1	20	1.67	18.33
95	1	18	1.67	16.33
96	1	18	1.83	16.17
97	1	18	1.33	16.67
98	1	18	1.83	16.17
99	1	18	1.83	16.17
100	1	18	2.00	16.00
101	0	18	2.17	15.83
102	0	18	2.00	16.00
103	0	18	1.67	16.33
104	0	18	1.17	16.83
105	0	18	0.83	17.17
106	0	18	1.00	17.00
107	0	18	1.00	17.00
108	1	20	2.00	18.00
109	0	20	2.00	18.00
110	0	20	1.33	18.67
111	0	20	1.67	18.33
112	0	20	1.33	18.67
113	0	18	1.00	17.00
114	0	18	1.83	16.17
115	0	20	2.00	18.00
116	0	20	1.83	18.17
117	0	20	1.50	18.50
118	0	20	1.67	18.33
119	0	18	1.00	17.00
120	0	18	1.00	17.00
121	0	18	1.50	16.50
122	0	18	1.17	16.83
123	0	18	1.00	17.00
124	0	18	1.17	16.83
125	0	18	1.50	16.50
126	0	18	1.17	16.83
127	0	18	1.00	17.00
128	0	18	0.67	17.33
129	0	18	0.75	17.25
130	0	18	1.50	16.50
131	0	18	1.25	16.75
132	0	18	1.92	16.08
		Total length (ft)	=	757.42
		Square footage (sqft)	=	4544.50

TABLE 1(continued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
133	0	18	0.83	17.17
134	0	18	0.67	17.33
135	0	18	0.67	17.33
136	0	18	1.00	17.00
137	0	18	1.17	16.83
138	0	18	1.92	16.08
139	0	18	1.83	16.17
140	0	18	2.08	15.92
141	0	18	1.58	16.42
142	0	18	0.92	17.08
143	0	18	1.75	16.25
144	0	18	1.83	16.17
145	0	18	1.58	16.42
146	0	18	1.50	16.50
147	0	18	1.83	16.17
148	0	18	1.75	16.25
149	0	18	1.42	16.58
150	0	18	0.92	17.08
151	0	18	1.17	16.83
152	0	18	0.50	17.50
153	0	18	0.83	17.17
154	0	18	1.42	16.58
155	0	18	0.92	17.08
156	0	18	1.33	16.67
157	0	18	1.58	16.42
158	0	18	0.08	16.92
159	0	18	0.92	17.08
160	0	18	0.83	17.17
161	0	18	1.17	16.83
162	0	18	1.50	16.50
163	0	16	1.00	15.00
164	0	16	1.58	14.42
165	0	16	1.33	14.67
166	0	18	1.08	16.92
167	0	18	0.58	17.42
168	0	16	0.50	15.50
169	0	16	1.00	15.00
170	0	16	1.08	14.92
171	0	16	1.33	14.67
172	0	16	0.92	15.08
173	0	16	1.22	14.78
174	0	16	0.42	15.58
175	0	16	1.00	15.00
176	0	16	0.75	15.25
		Total length (ft)	=	715.69
		Square footage (sqft)	=	4294.17

TABLE 1 (continued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
177	0	16	1.17	14.83
178	0	16	1.08	14.92
179	0	16	1.17	14.83
180	0	16	0.67	15.33
181	0	16	1.42	14.58
182	0	16	1.50	14.50
183	0	16	1.50	14.50
184	0	16	1.58	14.42
185	0	16	1.67	14.33
186	0	16	1.67	14.33
187	0	16	1.75	14.25
188	0	16	1.58	14.42
189	0	16	1.17	14.83
190	0	16	1.50	14.50
191	0	16	1.25	14.75
192	0	16	1.00	15.00
193	0	16	1.00	15.00
194	0	16	1.33	14.67
195	0	16	1.33	14.67
196	0	16	1.33	14.67
197	0	16	1.75	14.25
198	0	16	1.50	14.50
199	0	16	1.00	15.00
200	0	16	1.00	15.00
201	0	16	0.50	15.50
202	0	16	0.08	15.92
203	0	16	0.33	15.67
204	0	16	0.92	15.08
205	0	16	0.83	15.17
206	0	16	1.42	14.58
207	0	16	1.42	14.58
208	0	16	1.50	14.50
209	0	16	1.75	14.25
210	0	16	0.92	15.08
211	0	16	0.92	15.08
212	0	16	1.08	14.92
213	0	16	1.42	14.58
214	0	16	1.42	14.58
215	0	16	0.67	15.33
216	0	16	1.33	14.67
217	0	16	0.92	15.08
218	0	16	0.67	15.33
219	0	16	1.00	15.00
220	0	16	2.00	14.00

Total length (ft) = 651.00

Square footage (sqft) = 3906.00

100706

TABLE 1(continued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
221	0	16	1.33	14.67
222	0	16	1.33	14.67
223	0	16	1.50	14.50
224	0	16	1.50	14.50
225	0	16	0.67	15.33
226	0	16	0.67	15.33
227	0	16	1.50	14.50
228	0	16	0.33	15.67
229	0	16	0.83	15.17
230	0	16	0.83	15.17
231	0	16	0.75	15.25
232	0	16	0.67	15.33
233	0	16	0.67	15.33
234	0	16	0.92	15.08
235	0	16	1.33	14.67
236	0	16	0.75	15.25
237	0	16	0.58	15.42
238	0	16	0.50	15.50
239	0	16	0.92	15.08
240	0	16	0.58	15.42
241	0	16	0.50	15.50
242	0	16	0.75	15.25
243	0	16	0.92	15.08
244	0	16	1.00	15.00
245	0	16	1.33	14.67
246	0	16	1.33	14.67
247	0	16	1.08	14.92
248	0	16	1.42	14.58
249	0	16	0.50	15.50
250	0	18	0.83	17.17
251	0	18	0.25	17.75
252	0	18	0.33	17.67
253	0	18	0.50	17.50
254	0	18	0.83	17.17
255	0	18	0.75	17.25
256	0	18	0.75	17.25
257	0	18	0.58	17.42
258	0	18	0.92	17.08
259	0	18	2.00	16.00
260	0	18	1.25	16.75
261	0	18	0.83	17.17
262	0	18	0.00	18.00
263	0	18	0.50	17.50
264	0	18	0.67	17.33

Total length (ft) = 696.00

Square footage (sqft) = 4176.00

TABLE 1 (continued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
265	0	18	1.25	16.75
266	0	16	1.25	14.75
267	0	16	0.50	15.50
268	0	16	0.17	15.83
269	0	16	1.33	14.67
270	0	16	0.25	15.75
271	0	16	0.83	15.17
272	0	18	0.25	17.75
273	0	18	1.00	17.00
274	0	18	0.67	17.33
275	0	20	2.17	17.83
276	0	20	0.50	19.50
277	0	18	1.00	17.00
278	0	18	0.75	17.25
279	0	18	0.92	17.08
280	0	18	0.75	17.25
281	0	18	0.75	17.25
282	0	18	0.75	17.25
283	0	18	0.67	17.33
284	0	16	0.50	15.50
285	0	18	1.00	17.00
286	0	18	1.00	17.00
287	0	16	0.33	15.67
288	0	16	0.00	16.00
289	0	16	0.17	15.83
290	0	18	0.25	17.75
291	0	18	0.50	17.50
292	0	18	0.58	17.42
293	0	18	1.00	17.00
294	0	18	0.67	17.33
295	0	18	0.42	17.58
296	0	20	0.67	19.33
297	0	20	0.58	19.42
298	0	20	0.67	19.33
299	0	20	0.50	19.50
300	0	20	0.50	19.50
301	0	20	0.42	19.58
302	0	20	0.50	19.50
303	0	20	0.75	19.25
304	0	20	0.92	19.08
305	0	20	0.58	19.42
306	0	20	1.50	18.50
307	0	20	0.25	19.75
308	0	20	0.33	19.67
Total length (ft)		=		771.67
Square footage (sqft)		=		4630.00

TABLE 1 (cotinued)
SCP CARLSTADT SUPERFUND PROJECT
Gundwall Vertical Panel Embedment Depth (con't)

Panel Number	Number of Additional Anchors	Panel Length (ft) [a]	Panel Stick Up (ft) [b]	Embedment Depth (ft) [a - b]
309	0	20	0.42	19.58
310	0	20	0.42	19.58
311	0	16	0.67	15.33
312	0	16	0.67	15.33
313	0	20	0.25	19.75
314	0	16	0.25	15.75
315	0	16	0.67	15.33
316	0	16	0.83	15.17
317	0	16	0.75	15.25
318	0	16	1.25	14.75
319	0	16	0.83	15.17
320	0	16	1.08	14.92
321	0	16	1.50	14.50
322	0	16	1.50	14.50
323	0	16	1.25	14.75
324	0	16	2.00	14.00

Total length (ft) = 239.67

Square footage (sqft) = 1475.33

Notes:

1. Panel number 324 is 32 inches wide.
2. Panels numbered 296, 297, 300, 301, thru 310, and 313 were replaced with 20 foot long panels after 18 foot long panels were no longer available.
3. A Gundlock section was placed on the inside of panels 1 thru 8 to act as a spacer between the panel and insertion plate.

Calculation for sheet # 324 (sqft)

(32 inches / 12 inches per foot) (16 feet - 2 foot) = 37.33

Total Square Footage (sq.ft.) = 32124.00

TABLE 2

SCP CARLSTADT SUPERFUND PROJECT
6mm Hydrotite Swelling Test Results
Samples Coated with Wesson Oil and Immersed in Water

Sample ID #	Initial Diameter (mm) [a]	Diameter @ 24 Hrs. (mm) [b]	24 Hr. Expansion Ratio [b / a]	Diameter @ 48 Hrs. (mm) [c]	48 Hr. Expansion Ratio [c / a]
1	6.00	7.70	1.28	8.70	1.45
2	6.00	6.00	1.00	6.00	1.00

Notes:

Seperate Hydrotite Samples Immersed in Wesson Oil Only Showed No Expansion.

TABLE 3

**SCP CARLSTADT SUPERFUND PROJECT
SHEETS REQUIRING 5 mm HYDROTITE INSERTS AT SURFACE**

Sheet #'s	Length Required (inches)	Installed Length (inches)	Date Installed
79 & 80	32	32	1/10/91
127 & 128	14	14	1/10/91
128 & 129	113	113	1/10/91
131 & 132	32	32	1/9/91
134 & 135	79	79	1/9/91
190 & 191	46	46	1/9/91
196 & 197	18	18	1/9/91
228 & 229	15	15	1/9/91
238 & 239	5	5	1/9/91
292 & 293	67	67	1/10/91

TABLE 4

SCP CARLSTADT SUPERFUND PROJECT
5mm Hydrotite Swelling Test Results

Sample ID #	Initial Diameter (mm) [a]	Diameter @ 24 hrs. (mm) [b]	24 Hr. Expansion Ratio [b / a]	Diameter @ 48 hrs. (mm) [c]	48 Hr. Expansion Ratio [c / a]
1	5.0	8.0	1.60	9.4	1.88
2	5.0	8.3	1.66	9.4	1.88

Note:

1. All tests specimens were immersed in water.

By FVG Date 1/22/92 Subject HYDROTITE "STRETCHING" Sheet No. 1 of 3
 Chkd. By PPF Date 1/24/92 CALCULATIONS Proj. No. 30-198
 1/4" X 1/4"

I. SUMMARY

DURING INSTALLATION OF THE HYDROTITE INTO THE GUNWALL INTERLOCKS, SOME "STRETCHING" OF THE HYDROTITE OCCURRED DUE TO FRICTIONAL AND/OR ADHESIVE FORCES. GUNWALL PANEL LENGTHS DEPLOYED ON THIS PROJECT WERE 10', 13' AND 20'. THE MAXIMUM AMOUNT OF STRETCHING OBSERVED IN THE FIELD BY CANONIE'S QA/QC ENGINEER, ETE PORTER, WERE AS FOLLOWS:

<u>PANEL LENGTH</u>	<u>APPROX. STRETCHING OBSERVED</u>
6'	4.5'
13'	6.5'
20'	7.5'

II. "STRETCHING" CALCULATIONS

• $\text{PERCENT STRETCH} = \frac{\text{APPROX. STRETCHING OBSERVED}}{\text{PANEL LENGTH}}$

<u>PANEL LENGTH</u>	<u>APPROX. STRETCHING OBSERVED</u>	<u>PERCENT STRETCH</u>
6'	4.5'	25%
13'	6.5'	36%
20'	7.5'	38%

THE WORST-CASE ASSUMPTION IS THAT THE LENGTH STRETCHING CAUSED A 1-TO-1 RATIO DECREASE IN THE HYDROTITE DIAMETER

By EVG Date 1/22/92 Subject HYDROTITE "STRETCHING" Sheet No. 2 of 3
 Chkd. By PPP Date 1/24/92 CALCULATIONS Proj. No. 90-198
 1/4" X 1/4"

II. REDUCTION IN HYDROTITE DIAMETER

- $\text{REDUCED HYDROTITE DIAMETER} = (1 - \text{PERCENT STRETCH}) \times \text{HYDROTITE DIAMETER}$
- WORST CASE FROM SECTION II FOR PERCENT STRETCH IS 38%
- $\text{HYDROTITE DIAMETER} \approx 6\text{mm}$
- $\text{REDUCED HYDROTITE DIAMETER} = (1 - 0.38)(6\text{mm}) = 3.75\text{mm}$

IV. REQUIRED EXPANSION

THE LARGEST ANNULAR SPACE ALONG ANY HORIZONTAL DIMENSION OF THE GUNWALL INTERLOCK IS APPROXIMATELY 6.77mm (FROM GUNDE LITERATURE). THEREFORE, THE EXPANSION RATIO REQUIRED BY THE REDUCED DIAMETER SECTION OF HYDROTITE IS:

$$\frac{6.77\text{mm}}{3.75\text{mm}} = 1.81$$

VI. LONG TERM RESULTS

CANONIE RETAINED TWO SAMPLES OF HYDROTITE USED FOR THE INITIAL EXPANSION TESTS. THESE SAMPLES EXPANDED TO 11.6mm AND 11.7mm. THEREFORE, THE LONG-TERM DIAMETER EXPANSION RATIO FOR THIS MATERIAL IS APPROXIMATELY 1.93 TO 1.95.

Canonie

ATTACHMENT 1

By EJG Date 1/22/92 Subject HYDROTITE "STRETCHING" Sheet No. 3 of 3
Chkd. By PP Date 1/24/92 CALCULATIONS Proj. No. 90-199
1/4" X 1/4"

II. CONCLUSIONS

SINCE THE LONG-TERM DIAMETER EXPANSION RATIO (1.93 TO 1.95) EXCEEDS THE REQUIRED EXPANSION RATIO (1.81), THE WORST - CASE STRETCHING EFFECTS OBSERVED DURING THE GUNDWALL INSTALLATION WILL HAVE NO NEGATIVE IMPACT ON THE PERFORMANCE OF THE SLURRY WALL.

ATTACHMENT 2

TABLE OF WELL/PIEZOMETER MODIFICATIONS
SCP CARLSTADT SUPERFUND SITE

<u>Well/Piezometer</u>	<u>Raised/Replaced Repaired</u>	<u>Action Taken</u>
MW-1S	Replaced	See Attachment 1 for construction details.
MW-2S	Raised	Raised approx. 2.5' using 6" diameter steel outer pipe with coupling & 4" diameter type 316 stainless steel inner pipe with stainless steel coupling.
MW-2D	Raised	Raised approx. 2' using 8" diameter steel outer pipe with coupling & 4" diameter type 304 stainless steel inner pipe with stainless steel coupling.
MW-3S	Raised	Raised approx. 5' using 6" diameter steel outer pipe with coupling & 4" diameter type 316 stainless steel inner pipe with stainless steel coupling.
MW-4S	Raised	Raised approx. 4' using 6" diameter steel outer pipe with coupling & 4" diameter type 316 stainless steel inner pipe with stainless steel coupling.
MW-5S	Raised	Raised approx. 2' using 6" diameter steel outer pipe insert & 4" diameter type 316 stainless steel inner pipe with stainless steel coupling.
MW-5D	Raised	Raised approx. 2' using 8" diameter steel outer pipe with coupling & 4" diameter type 304 stainless steel inner pipe with stainless steel coupling.

ATTACHMENT 2

TABLE OF WELL/PIEZOMETER MODIFICATIONS
 SCP CARLSTADT SUPERFUND SITE
 (Continued)

<u>Well/Piezometer</u>	<u>Raised/Replaced Repaired</u>	<u>Action Taken</u>
MW-6S	Replaced	See attachment 2 for construction details.
MW-7S	Raised	Raised approx. 2' using 6" diameter steel outer pipe with coupling & 4" diameter type 316 stainless steel inner pipe with stainless steel coupling.
MW-7D	Raised	Raised approx. 2' using 8" diameter steel outer pipe with coupling & 4" diameter type 304 stainless steel inner pipe with stainless steel coupling.
P-2	Raised	Raised approx. 3.5' using 4" diameter steel outer pipe with coupling & 2" diameter PVC threaded inner casing.
P-3	Raised	Raised approx. 4' using 4" diameter steel outer pipe with coupling & 2" diameter PVC threaded inner pipe.
P-4	Raised	Raised approx. 2.5' using 4" diameter steel outer pipe with coupling & 2" diameter PVC threaded inner pipe.
P-6	Raised	Raised approx. 2' using 6" diameter steel pipe with coupling & 2" diameter PVC threaded inner pipe.
P-8	Repaired	Replaced existing protective 6" casing with approx. 5' of steel pipe. Raised 2" diameter PVC inner pipe with a PVC coupling.

ATTACHMENT 2

TABLE OF WELL/PIEZOMETER MODIFICATIONS
 SCP CARLSTADT SUPERFUND SITE
 (Continued)

<u>Well/Piezometer</u>	<u>Raised/Replaced Repaired</u>	<u>Action Taken</u>
P-9	Replaced	See Attachment 3 for construction details.
P-10	Raised	Raised approx. 2' using 6" diameter steel outer pipe with coupling & 2" diameter PVC threaded inner pipe.
P-11	Repaired	Replaced existing protective 6" casing with an approx. 5' steel outer pipe and CMP stabilizer. Raised 2" PVC inner pipe with PVC coupling.
P-14	Repaired	Replaced existing protective 6" casing with an approx. 5' steel outer pipe and CMP stabilizer. Raised 2" PVC inner pipe with PVC coupling.
Pipe 1	-	Cut 4" below ground surface and capped.
Pipe 2	-	Cut 4" below ground surface and capped.
Pipe 5	-	Cut 4" below ground surface and capped.
Pipe 7	-	Cut 4" below ground surface and capped.

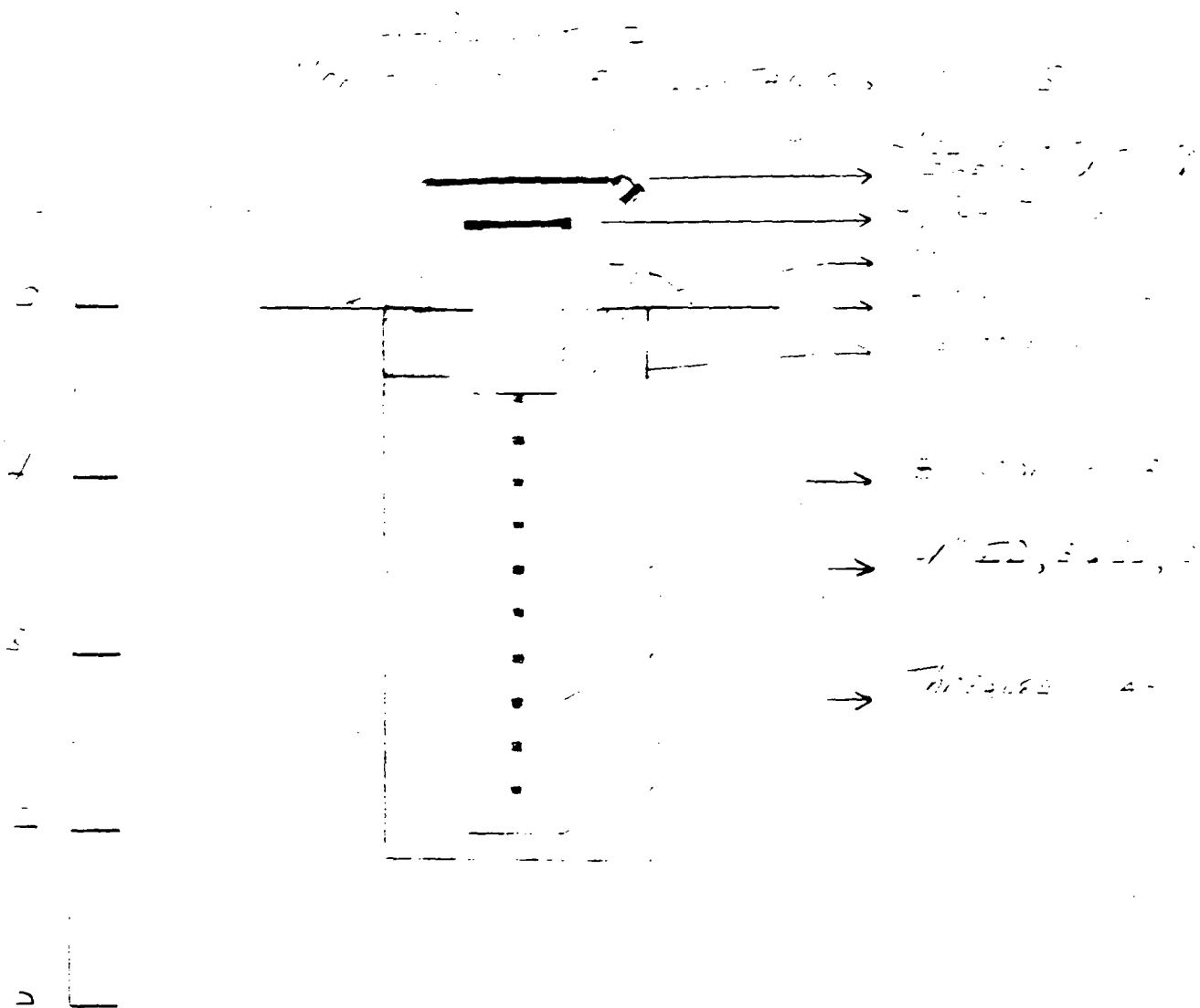
Canonie

B-92

By _____ Date _____ Subject _____ Sheet No. _____ of _____

Chkd. By _____ Date _____ Proj. No. _____

1/4" X 1/4"



Notes:
Ground surface is shown in the sketch.

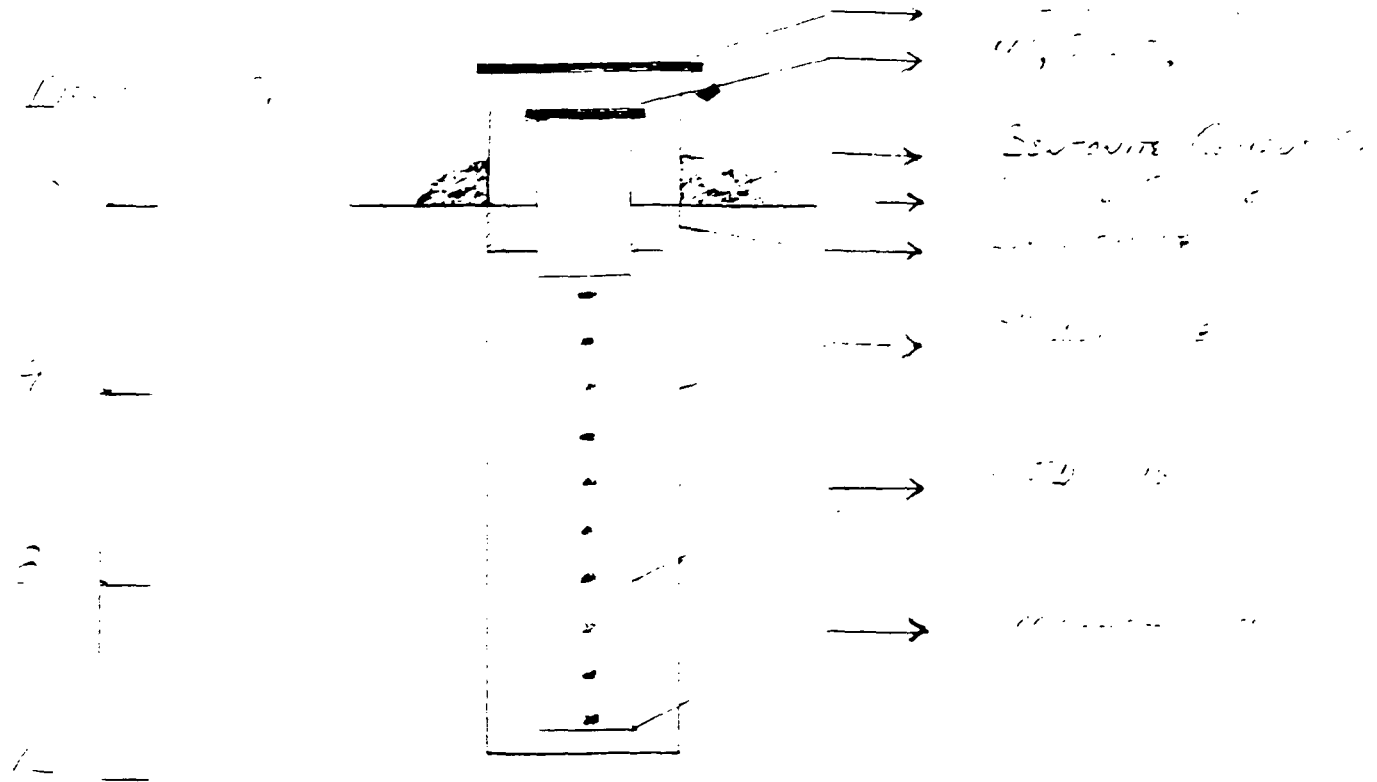
100719

Canonie

By _____ Date _____ Subject _____ Sheet No. _____ of _____

Chkd. By _____ Date _____ Proj. No. _____

1/4" X 1/4"



Ground elevation indicated by dashed line

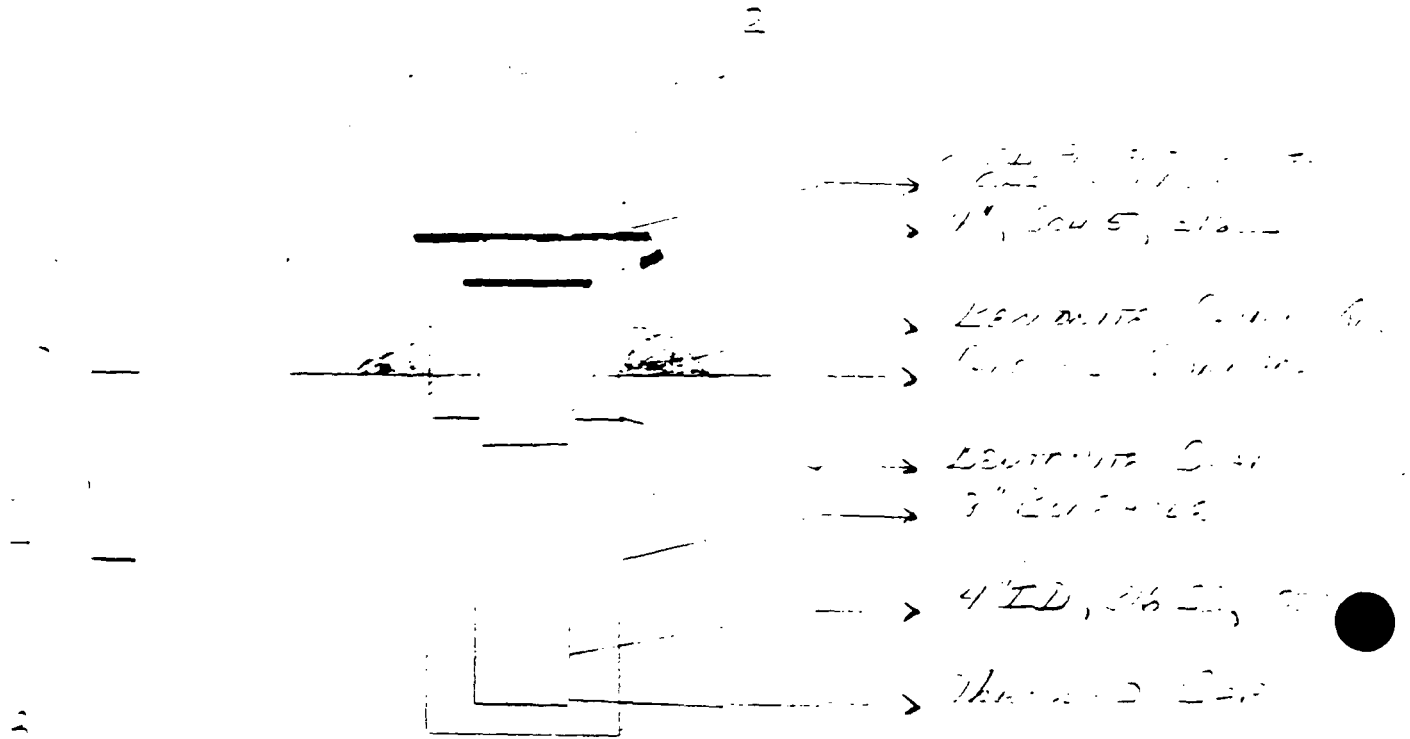
Canonie

B-94

By _____ Date _____ Subject _____ Sheet No. _____ of _____

Chkd. By _____ Date _____ Proj. No. _____

1/4" X 1/4"



100721

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

March 3, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
FEBRUARY 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between February 1, 1992 and February 29, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for March 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - Other QA/QC Activity.

2.0 - Work Completed

During the period from February 1, 1992 to February 29, 1992, Canonie made progress in the following areas:

- o Section 2.1 - Site Grading;
- o Section 2.2 - Well & Piezometer Installation;
- o Section 2.3 - Dewatering System Installation;
- o Section 2.4 - Demobilization Activity.

100722

Joe Mihm

2

March 3, 1992

2.1 - Site Grading

Canonie continued site grading activities using site soils and the trench spoils in accordance with the approved Modification Request 14. Adverse weather conditions encountered during the winter months have impacted the site grading activities. The weather has continually plagued this activity preventing proper preparation of the subgrade. Canonie will continue to attempt grading activities whenever weather permits. Both Canonie and the EPA had soils experts on-site to inspect the subgrade to determine if the soils were dry and hardpacked or saturated and frozen. No consensus of opinion was reached.

Whenever grading was attempted to prepare the surface for installation of the infiltration barrier, Canonie satisfied the requirements of the Quality Assurance Project Plan (QAPP), Section 2.3.1, related to this work.

2.2 - Well & Piezometer Installation

Work was performed on the piezometers and wells according to the plans presented in Modification Request 12. The work included cutting and capping the casings to their final above grade elevations. Canonie completed this work with no deviations from the details presented in Modification Request 12. There were no requirements in the QAPP covering this work.

2.3 - Dewatering System Installation

The 10000 gallon dike tank, to be used for holding recovered ground water prior to shipment off-site, was received on site and positioned in the staging area. The sand bags to be used for temporary weighting of the infiltration barrier and later as permanent supports for the double containment piping were received

CanonieEnvironmental

Joe Mihm

3

March 3, 1992

on site and stockpiled in the staging area.

The dike tank satisfied the requirements in Section 2.4 of the QAPP and Section 15100 of the Technical Specifications. Canonie ensured the construction of the sand bags met the requirements of Section 5.3 of the Remedial Design by instructing the subcontractor of the requirement of 2 pounds concrete per 28 pounds of sand per bag and by random checks on procedures while the sand bags were made.

2.4 - Demobilization Activity

Decontamination of the CAT 235, CAT D4, and loader was completed. Maintenance was performed on the existing perimeter fence, loose debris across the site was collected, and the remaining on-site materials were secured for a possible temporary shutdown because of the adverse weather conditions.

Canonie performed this activity to ensure that there was no comprising of the work completed so far on-site which met the quality assurance objectives in the QAPP.

3.0 - Work Scheduled for March 1992

The work items scheduled for the month of March 1992 will be significantly impacted by the inclement weather and therefore Canonie has requested a temporary shutdown.

4.0 - Changes to Project Schedule

At this time, the project schedule has been set back primarily because of weather delays and will continue to slip as the winter months progress. Canonie anticipates a temporary shut down of site activities until there is an improvement in the weather related site conditions. An updated construction schedule is included with this report as Figure 1.

Joe Mihm

4

March 3, 1992

5.0 - Other QA/QC Activity

The geotextile material was received on-site this month to be used in the construction of the infiltration barrier. The material was stored under a plastic sheet to protect it from the weather and was inspected on a regular basis to ensure the cover was in place. All protective wrapping of these materials were kept in place until the time for installation.

Canonie took these precautions to maintain the quality of the material received from National Seal Company and to satisfy the requirements stated in Section 2.3.1.1 of the QAPP. Material for the infiltration barrier was required to at least meet the standards noted in the Technical Specifications Section 2210. These standards plus the vendor's information for the conformance tests will be included in the March QA/QC Control Report.

For most of this month, the subgrade soils were inappropriate for grading to meet the desired conditions for final grading as noted in the Technical Specifications Section 2200 & 2210. Attempts to grade the site proved difficult due to temperature changes which resulted in the surface soils becoming very soupy as it warmed and frozen when the temperature dropped below 32 degrees Fahrenheit. Either condition resulted in a poor subgrade, which would not allow the infiltration barrier installer to perform the work and guarantee its effectiveness. The most appropriate action would be to wait for proper weather conditions before pursuing this work further.

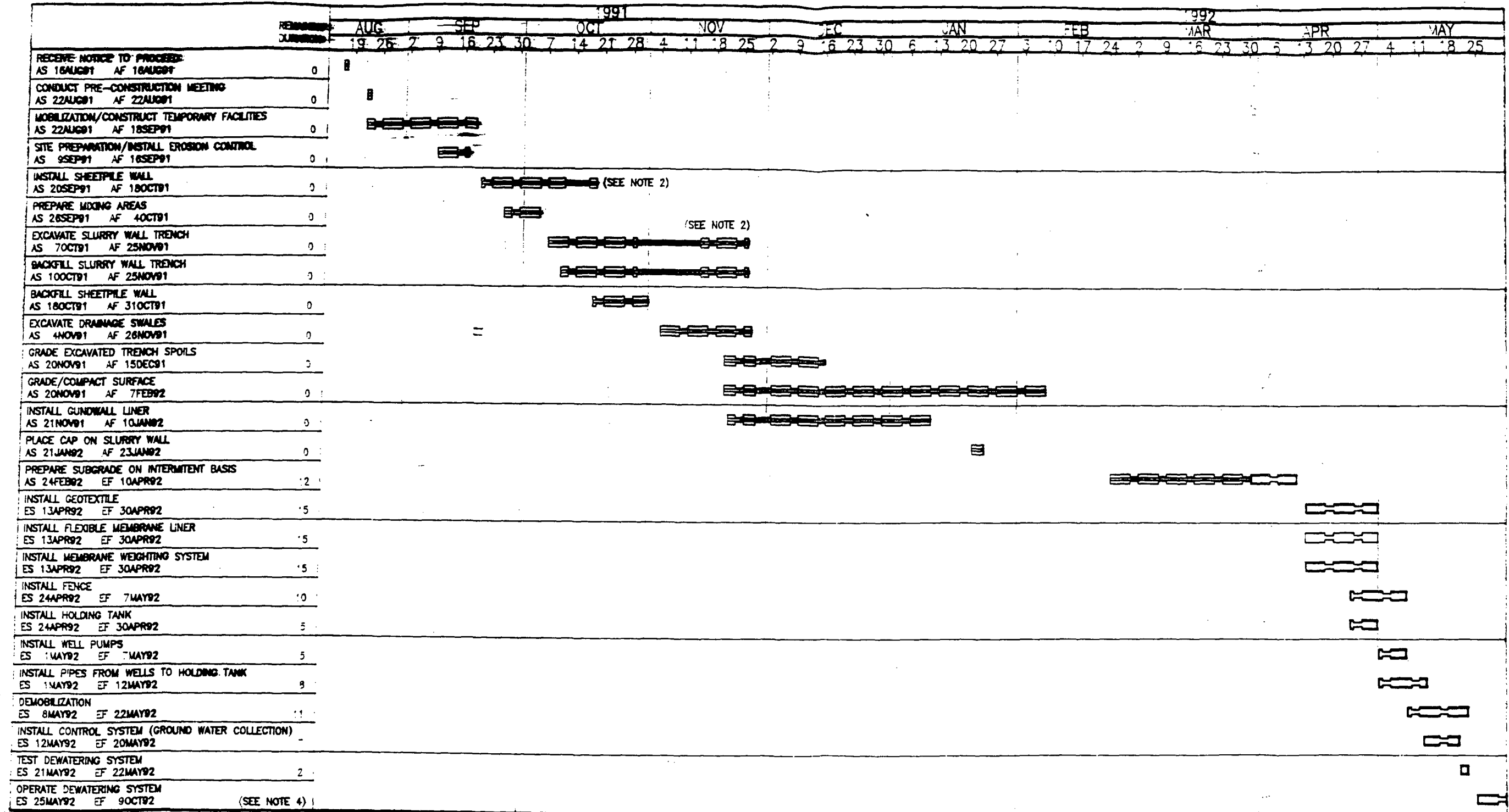
SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Frank Gontowski - Canonie
Jim Semple - Canonie

100725

CanonieEnvironmental

DRAWING NUMBER 90-198-B72



NOTES:

1. THE REVISED PROJECT SCHEDULE IS BASED ON THE UNILATERALLY REQUIRED SCHEDULE MILESTONES GIVEN IN THE EPA'S MARCH 23, 1992 LETTER.
2. WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND/OR DEFLECTED SHEETPILE PROBLEM.
3. GRADING WORK IS DEPENDENT ON WEATHER CONDITIONS AND WILL OCCUR INTERMITTENTLY AS CONDITIONS ALLOW.
4. THE DEWATERING OPERATION WILL CONTINUE ON AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

LEGEND:

- ACTIVITY BAR
- CRITICAL ACTIVITY
- PROGRESS BAR

REVISED PROJECT SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR
COOPERATING PRP GROUP

CanonieEnvironmental

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

April 3, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
MARCH 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance/Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between March 1, 1992 and March 31, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for April 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - Other QA/QC Activity.

2.0 - Work Completed

During the period from March 1, 1992 to March 31, 1992, Canonie made progress towards completion of the following work items:

- o Section 2.1 - Site Grading Activity;
- o Section 2.2 - Dewatering System Installation;
- o Section 2.3 - Sheetpile Deflection Measurement;
- o Section 2.4 - Infiltration Barrier Construction.

100727

CanonieEnvironmental

Joe Mihm

2

April 3, 1992

2.1 - Site Grading Activity

Areas north and west of the slurry pond were graded to encourage soil drying. Spoils were placed to fill the void between MW-6SR and the PCB remnant pile, selected areas were rolled to prepare for placement of the infiltration barrier, and areas around the slurry pond were graded.

All site grading was done when weather conditions permitted and was completed so as to satisfy the requirements in the Quality Assurance Project Plan (QAPP) Section 2.3.1. No specific QA/QC testing was required for this activity. As part of preparing the surface for installation of the infiltration barrier, stone from the staging area was removed to use during the construction of the anchor trench.

2.2 - Dewatering System Installation

Work initiated last month to set the wells and piezometers to their final elevations was completed this month according to the plans outlined in Modification Request 12. The 10,000 gallon holding tank was placed in position for dewatering operation and the rain shields were installed above the dike. Measurement of the water levels in MW-5S, MW-6SR, MW-7S, and P-14 were collected in March. Results of these measurements are found in Attachment 1. The water levels indicated that the groundwater level was approaching the top of the slurry wall and a decision was therefore made to place a well pump in MW-6SR with the necessary controls. This pump would be available to operate if necessary. A temporary discharge line was run from MW-6SR to the 10,000 gallon holding tank for discharge of the water.

2.3 - Sheetpile Deflection Measurement

To ensure that the final placement of the sheetpile wall met the requirements in the Technical Specifications Section 2310, the

Joe Mihm

3

April 3, 1992

deflection from vertical along the sheetpile wall has been measured at the end of each month this year. A summary table of these results will be part of the QA/QC report for the month of April. As of this date, Canonie has measured no change in the vertical position of the wall. This indicates that the installation in January of the H-piles at selected points along Peach Island Creek was effective at ensuring the stability of the wall. Final placement of the sheetpile wall had to meet the Technical Specifications in Section 2310 which required the wall to be less than .25 inches per foot from vertical.

2.4 - Infiltration Barrier Construction

All material was received by the end of March for construction of the infiltration barrier, the geotextile, geomembrane, 60 mil HDPE liner, and sand bags. These materials were stored within the Exclusion Zone.

All material for the infiltration barrier from National Seal Company satisfied the specifications given in Section 2.3.1.1 of the QAPP and Section 2210 of the Technical Specifications. Information supplied by the vendor to verify the quality of the 60 mil HDPE geomembrane sent to the site is found in Attachment 2. Because additional geotextile was needed on-site quickly, a local supplier of geotextile from Spartan Technologies supplied the necessary additional rolls. Attachment 3 contains the QA/QC information on this geotextile; it shows the material satisfied the requirements for geotextile in Section 2210 of the Technical Specifications. The sand bags met the requirements given in Section 5.3 of the Remedial Design, that each bag, made of nylon or polypropylene, contain approximately 28 pounds of sand and 2 pounds of cement.

3.0 - Work Scheduled for April 1992

100729

CanonieEnvironmental

Joe Mihm

4

April 3, 1992

The work items scheduled for the month of April 1992 include the following:

- o Tentatively plan on continuing site grading as weather permits;
- o Operate the pump in MW-6SR to reduce water levels in the area & continue taking water level measurements on an as-needed basis;
- o Begin installation of the dewatering system;
- o Begin installation of the infiltration barrier if site grading is completed;
- o Begin erection of the new perimeter fence.

4.0 - Changes to Project Schedule

The project schedule has slipped because of weather impacts and there is potential for some additional slippage due to weather conditions. The EPA issued a letter dated March 23, 1992 which specified revised schedule milestones for the project. A revised construction schedule is included with this report as Figure 1.

5.0 - Other QA/QC Activity

Grading of the surface soil was very difficult due to the saturated condition of the site. Grading was done in the staging area where the surface stone had been removed, in low areas within the slurry wall to promote drainage, and to improve drainage in the areas around the slurry pond. Any grading this month was dependent on favorable weather conditions; frost and frozen earth still occurred during the latter part of March. Selected areas which had an acceptable grade were rolled in preparation for the start of the

100730

Canonie Environmental

Joe Mihm

5

April 3, 1992

infiltration barrier installation.

Measurement of the water levels within the slurry wall, found in Attachment 1, necessitated the installation of a well pump in MW-6SR for precautionary measures. The pump and controls met the specifications given in Section 15100, Part 2.1 and 2.2.; a temporary discharge line was run from the pump to the 10,000 gallon holding tank. Operation of this pump started during the day on March 30, 1992.

Canonie was preparing to issue the QA/QC data generated from the following construction activities: the initial sheetpile wall installation, verification of the integrity of the Gundwall interlocks, measurement of the top of slurry wall and Gundwall elevations, and the sheetpile wall lengths, stick-up heights, and stations. At this time, only the verification letter from the installer of the Gundwall was outstanding.

SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Frank Gontowski - Canonie
Jim Semple - Canonie

100731

CanonieEnvironmental

ATTACHMENT 1
GROUND WATER ELEVATIONS

TABLE OF GROUNDWATER ELEVATIONS
SCP CARLSTADT SUPERFUND PROJECT

WELL/ PIEZO #	TOP OF INNER WELL/PIEZO CASING ELEV. (ft)	JANUARY 31, 1992		FEBRUARY 7, 1992		FEBRUARY 24, 1992		MARCH 5, 1992		MARCH 20, 1992	
		DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV. (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV. (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV. (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV. (ft)	DEPTH TO WATER TABLE (ft)	GROUNDWATER ELEV. (ft)
MW-1SR	11.48	5.3	6.2	5.6	5.9	5.5	6.0	5.3	6.2	5.3	6.2
MW-2S	12.26	5.9	6.4	6.0	6.3	5.7	6.6	5.4	6.9	5.7	6.6
MW-3S	12.61	7.4	5.2	7.5	5.0	7.6	5.0	7.6	5.0	7.6	5.0
MW-4S	13.90	7.3	6.6	8.0	5.9	7.5	6.4	7.4	6.5	7.6	6.3
MW-5S	10.44	6.4	4.0	6.4	4.0	6.4	4.0	6.3	4.1	6.4	4.0
MW-6SR	7.81	4.3	3.5	4.4	3.4	4.3	3.5	4.2	3.6	4.0	3.8
MW-7S	11.15	5.1	6.1	5.7	5.5	5.0	6.2	5.1	6.1	5.0	6.2
P-2	12.83	6.3	6.5	6.6	6.2	6.6	6.2	6.4	6.4	6.5	6.3
P-3	13.38	8.4	5.0	8.7	4.7	8.5	4.9	8.5	4.9	8.5	4.9
P-4	11.61	5.2	6.4	5.4	6.2	5.0	6.6	4.8	6.8	5.0	6.6
P-5	8.67	-	-	-	-	-	-	-	-	-	-
P-6	10.79	4.9	5.9	5.0	5.8	4.8	6.0	4.6	6.2	4.7	6.1
P-8	11.75	5.5	6.3	5.7	6.1	5.7	6.1	5.5	6.3	5.5	6.3
P-9	10.85	4.1	6.8	4.4	6.5	4.1	6.8	3.8	7.1	3.8	7.1
P-10	11.30	-	-	7.3	4.0	7.0	4.3	6.9	4.4	6.8	4.5
P-11	12.05	-	-	6.7	5.4	6.6	5.5	6.5	5.6	6.7	5.4
P-14	10.39	6.4	4.0	6.4	4.0	6.3	4.1	6.3	4.1	6.3	4.1

ATTACHMENT 1

TECHNICAL SPECIFICATIONS & VENDOR'S INFORMATION

PART 2 - PRODUCTS

2.1 Infiltration Barrier Cushion Geotextile

- A. The geotextile to be utilized for a cushion layer beneath the infiltration barrier shall be a non-woven needle-punched polypropylene material with the following properties:

<u>Property</u>	<u>Test Procedure</u>	<u>Test Value</u>
Weight, oz/sqyd	ASTM D-3776 - minimum	11.0
Thickness, mils	ASTM D-1777 - minimum	120
Tensile, strength	ASTM D-4632 - minimum	265
Elongation, %	ASTM D-4632 - minimum	75
Puncture Strength, lbs	ASTM D-3787 - minimum	170
Mullen Burst Strength, psi	ASTM D-3786 - minimum	500
Trapezoidal Tear Strength, lbs	ASTM D-4533 - minimum	100
Coefficient of Permeability, cm/sec	ASTM D-4491 - typical	.35
Flow Rate, gal/sqft/min	ASTM D-4491 - typical	90
EOS (AOS)	ASTM D-4751 - typical	100+
UV Resistance % Strength Retention Hrs of Exposure (150)	ASTM D-4355 - minimum	70

2.2 Sheet Liner

- A. Sheet Liner: Shall be made from virgin, first-quality HDPE resin. The resin containing less than 3 percent by weight of additives, fillers, or extenders.
8. The HDPE liner shall have the following properties:

<u>Typical Properties</u>	<u>Test Method</u>	<u>Test Value</u>
Gauge (nominal)	--	60 mil (1.5 mm)
Tensile Properties (typical)		
1. Tensile Strength at Break (Pounds/inch-width)	ASTM D638 Type IV Dumb-bell at 2 ipm	240
2. Elongation at Break (Percent)		700
Puncture Resistance. Pounds. (Typical)	FTMS 101 Method 2065	80
Tear Resistance Initiation. Pounds. (Typical)	ASTM D1004 Die C	45
Dimensional Stability. % Change. Each Direction. (Max.)	ASTM D1204	±2
Low Temperature Brittleness. °F (Typical)	ASTM D746M procedure B	-112
Resistance to Soil Burial. Percent change in original (Typical)	ASTM D3083 Type IV Dumb-bell at 2 imp	
Tensile Strength at Break	Percent Change	±10
Environmental Stress Crack. Hours. (Min.)	ASTM D1693 10% (Igepal, 50°C)	1500

NSC

January 2, 1991

POLYETHYLENE RESIN CERTIFICATE OF ANALYSIS

Customer: Canonie Environmental

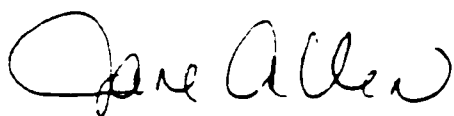
Resin Type: G36-24-149

Project: Carlstadt, NJ

Order Number: P030-07

The polyethylene resin referenced above was tested for melt flow index, density and carbon black content. Melt flow index was determined according to ASTM D 1238. Density was determined according to ASTM D 1505. Carbon black content was determined according to ASTM D 1603. The average test results are reported below.

Resin Blend Number	Extrusion Rod	
	321B	915C
Melt Flow Index (g/10 min)	0.41	0.27
Density (g/cm ³)	0.946	0.948
Carbon Black Content (percent)	2.16	2.28



Jane Allen
Quality Control Manager

GEOMEMBRANE CERTIFICATION

Customer: Canonie Environmental

Ship Date: 12-20-91

Project: Carlstadt, NJ

Number of Rolls Shipped: 17

Order Number: P030-07

Nominal Thickness: 60 mil

We hereby certify that the resin and polyethylene geomembrane for the above identified shipment, meets or exceeds National Seal Company's specifications, attached, and NSF Standard 54 specifications for HDPE geomembrane. The tests listed below in the resin specifications have been performed on each batch of resin. The tests listed below in the geomembrane specifications have been performed at least every 50,000 square feet of geomembrane.

RESIN SPECIFICATIONS

Melt Flow Index	1.0 Maximum
Density	0.94 Minimum
Carbon Black Content	2.0 to 3.0

GEOMEMBRANE SPECIFICATIONS

Thickness	60 mil Minimum
Stress at Yield	2200 psi Minimum
Stress at Break	3800 psi Minimum
Strain at Yield	13% Minimum
Strain at Break	700% Minimum
Carbon Black Dispersion	A1 or A2



Jane Allen
Quality Control Manager

1-2-92

Date

January 2, 1991

GEOMEMBRANE CERTIFICATE OF ANALYSIS

Customer: Canonie Environmental

Number of Rolls Shipped: 17

Project: Carlstadt, NJ

Number of Rolls Tested: 9

Order Number: P030-07

Nominal Thickness: 60 mil

The geomembrane referenced above was tested for thickness, tensile properties, carbon black dispersion and dimensional stability. Thickness was tested according to ASTM D 751. Tensile properties were tested according to ASTM D 638 using a type IV dumbbell specimen, a strain rate of two inches per minute and grip movement for strain determinations. Carbon black dispersion slides were prepared according to ASTM D 3015 and rated according to the ASTM D 2663 classification chart when viewed under 100X magnification. Dimensional stability was determined according to ASTM D 1204 at 100°C for one hour. The raw polymeric material is first quality polyethylene resin containing no more than 2% clean recycled polymer by weight. The average test results are reported below.

Roll Number		S6L-915C-L1903	S6L-915C-L1905	S6L-915C-L1910
Thickness (mils)		61.4	61.4	62.5
Stress at Yield (psi)	MD	2390	2430	2380
	TD	2640	2640	2530
Stress at Break (psi)	MD	4260	4690	4810
	TD	5090	4790	5180
Strain at Yield (percent)	MD	17.6	18.1	18.8
	TD	15.3	15.4	15.7
Strain at Break (percent)	MD	731	806	827
	TD	949	913	956
Carbon Black Dispersion		A1	A1	A1
Dimensional Stability	MD	-0.4	-0.4	-0.4
	TD	+0.2	0.0	0.0
Tear Resistance (ppi)	MD	860	855	863
	TD	803	799	812

Jane Allen

Quality Control Manager

January 2, 1991

GEOMEMBRANE CERTIFICATE OF ANALYSIS

(Page 2)

Roll Number		S6L-915C-L1912	S6L-915C-L1914	S6L-915C-L1920
Thickness (mils)		61.9	61.8	62.3
Stress at Yield (psi)	MD	2340	2570	2520
	TD	2560	2520	2610
Stress at Break (psi)	MD	4980	4960	4360
	TD	5170	5260	4800
Strain at Yield (percent)	MD	19.4	19.5	17.4
	TD	17.0	16.9	15.5
Strain at Break (percent)	MD	849	849	776
	TD	962	976	911
Carbon Black Dispersion		A1	A1	A1
Dimensional Stability	MD	-0.6	-0.6	-0.6
	TD	0.0	0.0	0.0
Tear Resistance (ppi)	MD	844	859	874
	TD	785	829	808

January 2, 1991

GEOMEMBRANE CERTIFICATE OF ANALYSIS

(Page 3)

Roll Number		S6L-915C-L1920	S6L-915C-L2002	S6L-915C-L2004
Thickness (mils)		62.3	62.4	62.1
Stress at Yield (psi)	MD	2520	2390	2410
	TD	2610	2650	2500
Stress at Break (psi)	MD	4360	4340	4000
	TD	4800	4970	4890
Strain at Yield (percent)	MD	17.4	17.3	16.3
	TD	15.5	15.3	15.9
Strain at Break (percent)	MD	776	778	702
	TD	911	926	933
Carbon Black Dispersion		A1	A1	A1
Dimensional Stability	MD	-0.6	-0.6	-0.6
	TD	0.0	0.0	0.0
Tear Resistance (ppi)	MD	858	863	876
	TD	813	808	820

nSc

January 8, 1991

CERTIFICATION

Customer: Canonie Environmental
 Project: Carlstadt, NJ
 Order No.: 030-07

I certify, the rolls listed below shipped to Canonie Environmental Services, at the above mentioned project will meet or exceed the following properties:

S6L-915C-L1914
 S6L-915C-L1913
 S6L-915C-L1912
 S6L-915C-L1911
 S6L-915C-L1910
 S6L-915C-L1909
 S6L-915C-L1903
 S6L-915C-L9104
 S6L-915C-L1905

S6L-915C-L2004
 S6L-915C-L2003
 S6L-915C-L2002
 S6L-915C-L2001
 S6L-915C-L1920
 S6L-915C-L1917
 S6L-915C-L1915
 S6L-915C-L1918

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>TEST VALUE</u>
Tensile @ Break	ASTM D 638	240 ppi
Puncture Resistance	FTMS 101 Method 2065	80 lbs
Tear Resistance	ASTM D 1004 Die C	45 ppi
Low Temp. Brittleness	ASTM D 746 Procedure B	-112°
Resistance to Soil Burial Tensile @ Break	ASTM D 3083	+/-10%

NATIONAL SEAL COMPANY



Jane Allen
 Quality Control Manager

100742

NSC

HDPE GEOMEMBRANE

National Seal Company's High Density Polyethylene (HDPE) geomembranes are extruded using virgin, first-quality, high molecular weight, polyethylene resin and are manufactured specifically for the purpose of containment in hydraulic structures. The HDPE compound used in NSC geomembranes has been formulated to be chemically resistant, free of leachable additives and resistant to ultraviolet degradation.

60 MIL (1.5mm) PHYSICAL PROPERTIES

ALL PROPERTIES MEET OR EXCEED NSF STANDARD 54 SPECIFICATIONS FOR HDPE

PROPERTY	MINIMUM AVERAGE ROLL VALUES (unless otherwise indicated)			
	ENGLISH		METRIC	
	UNITS	VALUE	UNITS	VALUE
THICKNESS, ASTM D 751, NSF Mod., Nominal	mils	60.0	mm	1.50
Minimum Average	mils	60.0	mm	1.52
Lowest Individual Reading	mils	57.0	mm	1.45
DENSITY, ASTM D 1505			g/cm ³	0.940
MELT FLOW INDEX, ASTM D 1238, Cond. E, Max.			g/10 min	1.0
CARBON BLACK CONTENT, ASTM D 1603	percent	2.0 to 3.0	percent	2.0 TO 3.0
CARBON BLACK DISPERSION, ASTM D 3015	rating	A1 or A2	rating	A1 or A2
MINIMUM TENSILE PROPERTIES, ASTM D 638				
Stress at Yield	psi	2200	MPa	15.2
	ppi	132	N/cm	231
Stress at Break	psi	3800	MPa	26.2
	ppi	228	N/cm	399
Strain at Yield	percent	13	percent	13
nominal gage of 1.30" per NSF Mod.				
Strain at Break	percent	700	percent	700
nominal gage of 2.5" per NSF Mod.	percent	560	percent	560
TEAR RESISTANCE, ASTM D1004	ppi	700	N/cm	1230
	lbs	42	N	187
PUNCTURE RESISTANCE, FTMS 101, 2065	ppi	1300	N/cm	2280
	lbs	78	N	347
ESCR, ASTM D 1693, NSF Mod., Pass	hours	1500	hours	1500
DIMENSIONAL STABILITY, ASTM D1204, NSF Mod, Max.	percent	2.0	percent	2.0

NATIONAL SEAL SEAMING PROPERTIES

(All NSC seams will demonstrate a Film Tearing Bond in Peel and Shear)

SHEAR STRENGTH, ASTM D 4437, NSF Mod.	psi	2000	MPa	13.8
	ppi	120	N/cm	210
PEEL ADHESION, ASTM D 4437, NSF Mod. (Hot wedge fusion weld)	psi	1500	MPa	10.3
	ppi	90	N/cm	158
PEEL ADHESION, ASTM D 4437, NSF Mod. (fillet extrusion weld)	psi	1300	MPa	8.97
	ppi	78	N/cm	137

HD-60-0391C

100743



A Subsidiary of
SPARTAN MILLS

SPARTAN TECHNOLOGIES

SPARTAN TECHNOLOGIES ST 120 HEATHER BLACK PRODUCT DESCRIPTION

Spartan Technologies ST 120 is a nonwoven fabric made up of polypropylene fibers. These fibers are needled to form a stable and durable network such that the fibers retain their relative position. The fabric is inert to naturally encountered chemicals, alkalies, acids and biological degradation. Spartan Technologies ST 120 conforms to the minimum average property values listed in the following table.

<u>PROPERTY</u>	<u>TEST PROCEDURE</u>	<u>MINIMUM AVG VALUE</u>
Weight, Oz/SqYd	ASTM D-3776	11.0
Thickness, Mils	ASTM D-1777	120
Tensile, Lbs	ASTM D-4632	265
Elongation, %	ASTM D-4632	75
Puncture, Lbs	ASTM D-3787	170
Mullen Burst, PSI	ASTM D-3786	500
Trapezoidal Tear, Lbs	ASTM D-4533	100
Water Permeability, Cm/Sec	ASTM D-4491	.35
Water Flow Rate, Gal/Min/SqFt	ASTM D-4491	90
EOS (AOS),	ASTM D-4751	100
US Std Sieve		
UV Resistance %	ASTM D-4355	70
Strength Retention Hrs of Exposure (150)		

1) The values listed are minimum average values, unless otherwise stated.

2) Elongation is read at Peak Break.

Jeffrey A. Bennett
Jeffrey A. Bennett
Process Control Manager

This letter is a certification and not a warranty. The contract to sell this product to you is subject to all of the terms and conditions set forth in our standard Certification of Order. The terms include a limitation of warranty and limitation on the time in which claims for defective products may be made. You should refer to the Certification of Order for complete listing of these terms and conditions.

10/91

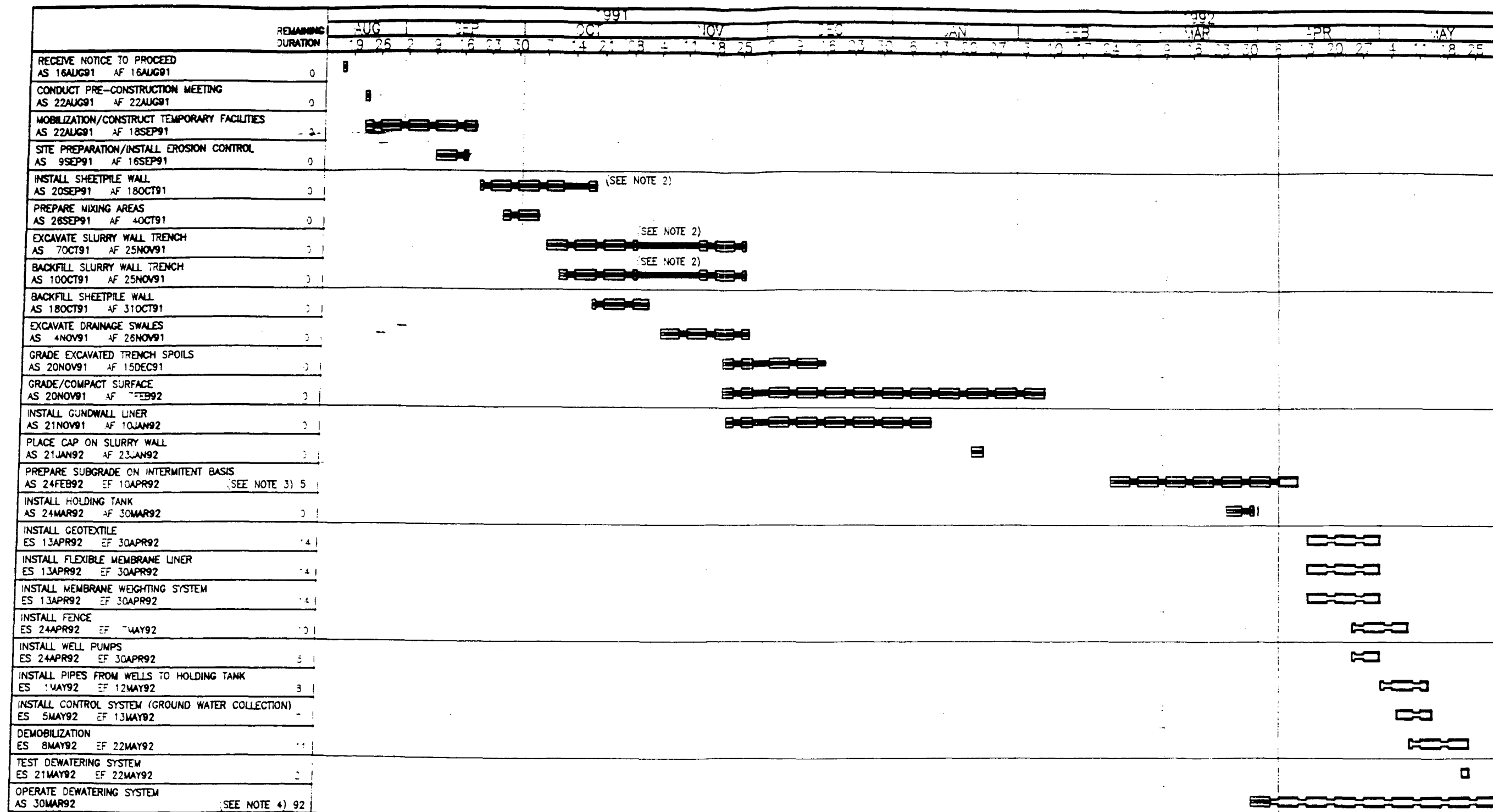
100744




MANUFACTURERS OF QUALITY NONWOVEN FABRICS
P.O. BOX 1658 / SPARTANBURG / SOUTH CAROLINA 29304

Tel. (803) 576-2353
Fax. (803) 574-2246



FIGURE 1
PROJECT SCHEDULE

DRAWING
NUMBER 90-198-B72**LEGEND:**

-  ACTIVITY BAR
 CRITICAL ACTIVITY
 PROGRESS BAR

NOTES:

- THE REVISED PROJECT SCHEDULE IS BASED ON THE UNILATERALLY REQUIRED SCHEDULE MILESTONES GIVEN IN THE EPA'S MARCH 23, 1992 LETTER.
- WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND/OR DEFLECTED SHEETPILE PROBLEM.
- GRADING WORK IS DEPENDENT ON WEATHER CONDITIONS AND WILL OCCUR INTERMITTENTLY AS CONDITIONS ALLOW.
- TEMPORARY DEWATERING COMMENCED AT WELL MW-6SR ON MARCH 30 AND WILL CONTINUE AS NEEDED TO CONTROL WATER LEVELS WITHIN THE SLURRY WALL. THE DEWATERING OPERATION WILL CONTINUE ON AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES. REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

MARCH PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR
COOPERATING PRP GROUP

Canonie Environmental

DATE: 2-1-92	FIGURE 1	DRAWING NUMBER 90-198-B72
SCALE: NONE		

△		UPDATED 5-8-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WLH	MLJ	JEM
△	3-28-92	REVISED PER EPA UNILATERAL SCHEDULE MILESTONES	JMR	MKL	JEM
△	2-28-92	REVISED PER PLAN OF ACTION IN LETTER DATED 2-28-92	JPR	MKL	JEM
△	2-7-92	UPDATED 2-1-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	JMR	MKL	JEM
No.	DATE	ISSUE / REVISION	DRAWN BY: [] CHECKED BY: []		

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

May 12, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
APRIL 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance/Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between April 1, 1992 and April 30, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for May 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - Other QA/QC Activity;

2.0 - Work Completed

During the period from April 1, 1992 to April 30, 1992, Canonie made progress towards completion of the following work:

- o Section 2.1 - Site Grading Activity;
- o Section 2.2 - Dewatering System Installation;
- o Section 2.3 - Infiltration Barrier Construction;
- o Section 2.4 - Site Fence Work;

CanonieEnvironmental

Joe Mihm

2

May 12, 1992

o Section 2.5 - Demobilization Activity.

2.1 - Site Grading Activity

Grading in the Exclusion Zone continued as weather permitted. The area around the slurry pond required the most additional effort to produce the necessary final grade. Stone removal from the staging area continued and was used during the anchor trench construction. The PCB remnant pile was graded to minimize surface water retention while minimizing excessive air emissions. Areas of the site at final grade were rolled in preparation for the start of the infiltration barrier installation.

There was no specific QA/QC testing required for this activity. Any grading Canonie performed satisfied the requirements of the Quality Assurance Project Plan (QAPP), Section 2.3.1, related to this work.

2.2 - Dewatering System Installation

Operation of the pump in MW-6SR continued during the first week of April producing 4342 gallons; all water was collected in the 10000 gallon holding tank. Operation was halted at the end of the week but resumed again on April 21, 1992. This was due to several days of heavy rainfall at the site which produced an increase in the water level elevation within the slurry wall. Data from the water level measurements are found in Attachment 1.

Installation of the well boxes plus the well caps was completed. The final monitoring well casing elevations are found in Attachment 2. Repairs were made to piezometer P-5 after a "kink" was discovered in the riser for this piezometer. Residual water found within the dike area of the 10000 gallon holding tank was transferred to the tank using a sump pump. Attachment 2 is the final monitoring well casing elevations.

Canonie Environmental

Joe Mihm

3

May 12, 1992

2.3 - Infiltration Barrier Construction

Work proceeded on April 15, 1992 on the installation of the infiltration barrier by National Seal Company with the deployment of geotextile where preparatory grading was completed. Workers were given instructions on the QA/QC procedures which were to be followed during the installation work. Work was halted on April 17 until April 27, 1992 due to heavy rains for most of that period. The QA/QC data generated in April during the infiltration barrier installation which included the trial weld information, destructive and non-destructive testing, panel seaming repairs, and panel placement information, will be reported in the QA/QC report for May.

A modification was made to the type of weighting to be used for the infiltration barrier. Ballast tubes made of HDPE, approximately 22 inches across and 8 feet long, were placed on the completed barrier and then filled with water. Concern about these ballast tubes freezing was allayed by a freezer test with one of these tubes. Results are discussed in Section 5.0.

2.4 - Site Fence Work

Fencing around the staging area and the decontamination pad was repaired. Canonie inspected and found that all materials used by the installer to repair the fences met the requirements in Section 02831 of the Technical Specifications and those noted in the approved Modification Request 17, dated December 10, 1991. Changes were made by Langan in the layout of the perimeter fence. Additional changes included a gate that was to be placed in the fence along Peach Island Creek, slots or some sort of visual screening material were approved for the fence along Gotham Parkway, and the path of the new perimeter fence was altered to enclose the 10000 gallon holding tank completely. A locked access gate will be placed near the electrical control sub-panel near the

Canonie Environmental

Joe Mihm

4

May 12, 1992

holding tank to allow the drivers access to unload the tank.

2.5 - Sheetpile Deflection Evaluation

Canonie installed H-piles along selected lengths of the sheetpile wall in January to prevent from occurring any additional deflection from vertical. Measurements were made using a plumb bob on top of each of the 259 sheets of the wall to determine its deflection from vertical. This was done three times between January and April. The results show no further deflection by the wall toward Peach Island Creek. The results also show the H-pile installation stabilized the position of the wall.

2.6 - Demobilization Activity

The QA/QC data Langan has requested has been sent. Langan also requested information on the pH and hardness of the municipal water supply. Details on this activity are found in Section 5.0. Drums, overpacks, and other material around tank T-5 were decontaminated and placed between the trailer and buildings on-site.

3.0 - Work Scheduled for May 1992

The work items scheduled for the month of May 1992 include the following:

- o Complete installation of the infiltration barrier and deployment & filling of ballast tubes;
- o Complete backfill of anchor trench;
- o Complete removal of crushed stone from staging area;
- o Erect the new perimeter fencing;

100750

Canonie Environmental

Joe Mihm

5

May 12, 1992

- o Complete work to improve the grade along Peach Island Creek;
- o Complete installation of dewatering system;
- o Demobilize trailers, disconnect utilities, and collect debris for disposal;
- o Complete site work by June 15, 1992.

4.0 - Changes to Project Schedule

Heavy rains during the month have delayed the schedule several weeks. The current projected date for end of field activities is now June 15, 1992. Canonie has continued grading the site to prepare select areas for installation of the infiltration barrier and has already chosen its subcontractors for installation of the dewatering system and the perimeter fence to minimize any additional time delays. The work on these items is scheduled to start near or at the completion of the infiltration barrier. A revision of the updated construction schedule is included with this report as Figure 1.

5.0 - Other QA/QC Activity

Canonie sent the QA/QC data to Langan generated during the installation of the Gundwall and all of the well and piezometer changes. The data included the Gundwall embedment depths, the sheets requiring the 5mm Hydrotite, the swelling tests with the 5mm Hydrotite, the well & piezometer modification and construction details, and Hydrotite's swelling calculations.

Canonie also provided information on the pH and hardness of the municipal water supply. According to the Hackensack Water Company, which supplies potable water to most of Bergen County, the pH

Canonie Environmental

Joe Mihm

6

May 12, 1992

varies from 8.2 to 8.5 and the hardness is 6-7 grains per gallon or 130 ppm. This meets the requirements of the Technical Specifications, Section 2410, Part 2.1.C.

Modification Request 25, dated April 9, 1992, was approved and permits the use of HDPE ballast tubes filled with water instead of sand bags to hold down the infiltration barrier. Since there was a concern these tubes could rupture when frozen, testing was performed. A sample tube, 36.5 inches long by 34.25 inches wide, of HDPE material similar to the infiltration barrier, was filled with water and placed in a freezer on April 8, 1992 for 11 days. No leaks were detected after thawing and the frozen and unfrozen dimensions showed no significant differences.

Heavy rains during the month resulted in an increase in water level measurements taken on April 17, 1992. These measurements are found in Attachment 1. Canonie decided to restart the pump installed in MW-6SR and the ground water collected was sent to the holding tank. Operation of the pump eliminated any further increase in water levels within the slurry wall.

During installation of the infiltration barrier, Canonie performed the QA/QC tests required by the QAPP and the Technical Specifications Section 2210. The compilation of the results of the field destructive tests and the other tests will be included with May's report. Canonie determined that all materials installed and seams produced in the field met or exceeded the project requirements. To minimize downtime and to allow seaming of the HDPE to continue when excessive moisture was present, Canonie utilized a wooden sled to isolate the device used for seaming from the subgrade moisture. Vacuum box testing, which is non-destructive testing of the seams in the HDPE liner, is planned for May. Sheetpile wall deflections were measured and are presented as Attachment 3.

100752

CanonieEnvironmental

ATTACHMENT 1
GROUND WATER TABLE ELEVATIONS

By FKG Date 4/17/12 Subject GWT ELEVATIONS Sheet No. 1 of 1

Chkd. By Date SCP CARLSTADT Proj. No. 32-129

1/4" X 1/4"

<u>MONITORING WELL /</u> <u>PEZOMETER</u>	<u>GWT</u> <u>ELEVATION</u>	<u>APPROX. ELEV.</u> <u>@ INSIDE EDGE</u> <u>OF SLURRY WALL</u>	
MW-13R	6.30	6.9	
MW-23	6.77	-	
MW-33	- (1)	9.0	
MW-43	6.63	-	
MW-53	4.22	7.0	
MW-63R	4.13	3.4	CRITICAL
MW-73	6.35	3.2	
P-2	6.60	-	
P-3	5.08	-	
P-4	6.54	-	
P-5	4.58	3.9	CRITICAL
P-6	6.16	7.7	
P-8	- (2)	-	
P-9R	7.07	7.7	
P-10	4.54	7.4	
P-11	5.84	7.9	
P-17	4.15	3.8	

NOTES:

- (1) NO GWT REG. TAKEN DUE TO PRESENCE OF SLUDGE.
- (2) GWT LEVEL REG. MISTAKENLY OMITTED DURING FIELD RECON.

ATTACHMENT 2
FINAL MONITORING WELL CASING ELEVATIONS

Canonie

By EC Date 4/10/92 Subject SCP CARLSTADT Sheet No. 1 of 1Chkd. By Date Proj. No. 30-198

1/4" X 1/4"

FINAL MONITORING WELL CASING ELEVATIONS

<u>WELL No.</u>	<u>ELEVATION</u>	<u>PREVIOUS ELEVATION</u>
MW-13R	9.72	11.48
MW-25	9.36	12.26
MW-20	12.10	-
MW-2R	11.31	-
MW-35	9.97	12.61
MW-45	10.48	13.90
MW-55	7.77	10.44
MW-50	10.26	-
MW-65R	5.37	7.81
MW-75	9.37	11.15
MW-70	11.21	-

* ELEVATIONS SHOT FRIDAY APRIL 10, 1992 BY CANONIE.

ATTACHMENT 3
SHEET PILE WALL DEFLECTIONS

SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	-0.36	-0.36
8	0	0	0	-0.6	-0.6
9	0	0	0	-0.24	-0.24
10	0	0	0	0.12	0.12
11	0	0	0	-0.12	-0.12
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0.06	0	-0.06	0	0
17	0.06	0	-0.06	0.36	0.36
18	0.5	0	-0.5	0.36	0.36
19	0.25	0	-0.25	0.36	0.36
20	0.25	0	-0.25	0.36	0.36
21	0.38	0	-0.38	0.48	0.48
22	0.5	0	-0.5	0.48	0.48
23	0.31	0.5	0.19	0.48	-0.02
24	0.63	0.75	0.12	0.6	-0.15
25	1	1.13	0.13	0.96	-0.17
26	0.75	1	0.25	0.96	-0.04
27	1.25	1.5	0.25	1.2	-0.3
28	2.13	2.38	0.25	1.8	-0.58
29	3.38	3.38	0	2.76	-0.62
30	2.75	3	0.25	3.24	0.24
31	2.25	2.5	0.25	2.4	-0.1
32	1.81	1.75	-0.06	1.56	-0.19
33	1.88	1.88	0	1.92	0.04
34	2.63	2.88	0.25	3	0.12
35	2.63	3	0.37	3.12	0.12
36	2.5	2.5	0	1.92	-0.58
37	2	2.25	0.25	1.68	-0.57
38	1.75	2.25	0.5	1.8	-0.45
39	1.75	1.75	0	1.32	-0.43
40	1.25	1.63	0.38	1.32	-0.31
41	1.5	1.38	-0.12	1.2	-0.18
42	2	1.13	-0.87	1.32	0.19
43	2.5	2.31	-0.19	1.92	-0.39
44	2.75	2.5	-0.25	2.16	-0.34
45	3	3	0	2.76	-0.24

SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
46	3.13	2.75	-0.38	3.24	0.49
47	1.75	2	0.25	2.88	0.88
48	2.63	1.75	-0.88	1.68	-0.07
49	2.88	2.38	-0.5	2.52	0.14
50	-0.75	-0.5	0.25	-0.6	-0.1
51	3	2.31	-0.69	2.28	-0.03
52	3	3.13	0.13	2.64	-0.49
53	0.5	-0.25	-0.75	-0.6	-0.35
54	3.5	3.13	-0.37	3.24	0.11
55	0.38	-0.13	-0.51	-0.36	-0.23
56	3.5	3.5	0	3.48	-0.02
57	2.75	3.63	0.88	3.6	-0.03
58	0.25	0	-0.25	-0.24	-0.24
59	2.38	3	0.62	2.4	-0.6
60	2.25	2.63	0.38	2.28	-0.35
61	2	2.5	0.5	2.16	-0.34
62	1.88	2.13	0.25	1.68	-0.45
63	1.75	2	0.25	1.56	-0.44
64	1.75	2	0.25	1.8	-0.2
65	1.88	1.63	-0.25	1.92	0.29
66	2	1.81	-0.19	2.04	0.23
67	2.13	1.94	-0.19	1.92	-0.02
68	2.38	2.06	-0.32	2.28	0.22
69	2.63	2.25	-0.38	2.4	0.15
70	2.5	2.44	-0.06	2.64	0.2
71	2.5	2.06	-0.44	2.4	0.34
72	2.25	2.19	-0.06	2.52	0.33
73	1.88	1.88	0	2.28	0.4
74	1.63	1.44	-0.19	1.92	0.48
75	2.13	1.19	-0.94	1.68	0.49
76	1.75	1.63	-0.12	2.16	0.53
77	1.75	1.44	-0.31	2.04	0.6
78	1.75	1.5	-0.25	1.8	0.3
79	1.63	1.19	-0.44	2.16	0.97
80	1.5	1	-0.5	1.56	0.56
81	1.56	0.94	-0.62	1.68	0.74
82	1.13	1	-0.13	1.56	0.56
83	1.5	1.31	-0.19	1.92	0.61
84	1.25	1.38	0.13	1.56	0.18
85	1.25	1.88	0.63	1.2	-0.68
86	1.38	1.25	-0.13	1.32	0.07
87	1.13	0.94	-0.19	1.44	0.5
88	1.25	1.06	-0.19	1.32	0.26
89	1.25	1.13	-0.12	1.44	0.31
90	1	1	0	1.2	0.2

SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
91	1	1.06	0.06	0.96	-0.1
92	0.88	0.75	-0.13	1.08	0.33
93	0.63	0.75	0.12	0.84	0.09
94	0.63	0.44	-0.19	0.6	0.16
95	0.5	0.63	0.13	0.84	0.21
96	0.5	0.19	-0.31	0.6	0.41
97	0.25	0.75	0.5	0.48	-0.27
98	0.25	0.5	0.25	0.24	-0.26
99	0.25	0.63	0.38	0.36	-0.27
100	0.25	0.5	0.25	0.48	-0.02
101	0.25	0.5	0.25	0.48	-0.02
102	0.38	0.5	0.12	0.48	-0.02
103	0.63	0.5	-0.13	0.36	-0.14
104	0.5	0.56	0.06	0.72	0.16
105	0.25	0.44	0.19	0.72	0.28
106	0.13	0.06	-0.07	0.48	0.42
107	0.13	0	-0.13	0.24	0.24
108	0.38	0.19	-0.19	0.36	0.17
109	0.25	0.38	0.13	0.48	0.1
110	0.25	0.5	0.25	0.48	-0.02
111	0.38	0.19	-0.19	0.48	0.29
112	0.25	0.63	0.38	0.48	-0.15
113	0.38	0.5	0.12	0.36	-0.14
114	0.38	0.38	0	0.36	-0.02
115	0.25	0.19	-0.06	0.24	0.05
116	0.25	0.13	-0.12	0.24	0.11
117	0.38	0.13	-0.25	0.24	0.11
118	0.38	0.13	-0.25	0.12	-0.01
119	0.25	0.19	-0.06	0.36	0.17
120	0.25	0.13	-0.12	0.12	-0.01
121	0.38	0.19	-0.19	0.24	0.05
122	0.38	0.38	0	0.36	-0.02
123	0.38	0.38	0	0.24	-0.14
124	0.5	0.38	-0.12	0.36	-0.02
125	0.5	0.5	0	0.36	-0.14
126	0.5	0.38	-0.12	0.48	0.1
127	0.63	0.19	-0.44	0.24	0.05
128	0.63	0.38	-0.25	0.48	0.1
129	0.63	0.38	-0.25	0.48	0.1
130	0.63	0.38	-0.25	0.6	0.22
131	0.69	0.31	-0.38	0.6	0.29
132	0.75	0.38	-0.37	0.6	0.22
133	1.13	0.31	-0.82	0.36	0.05
134	1.25	0.81	-0.44	0.84	0.03
135	1.5	0.88	-0.62	1.08	0.2

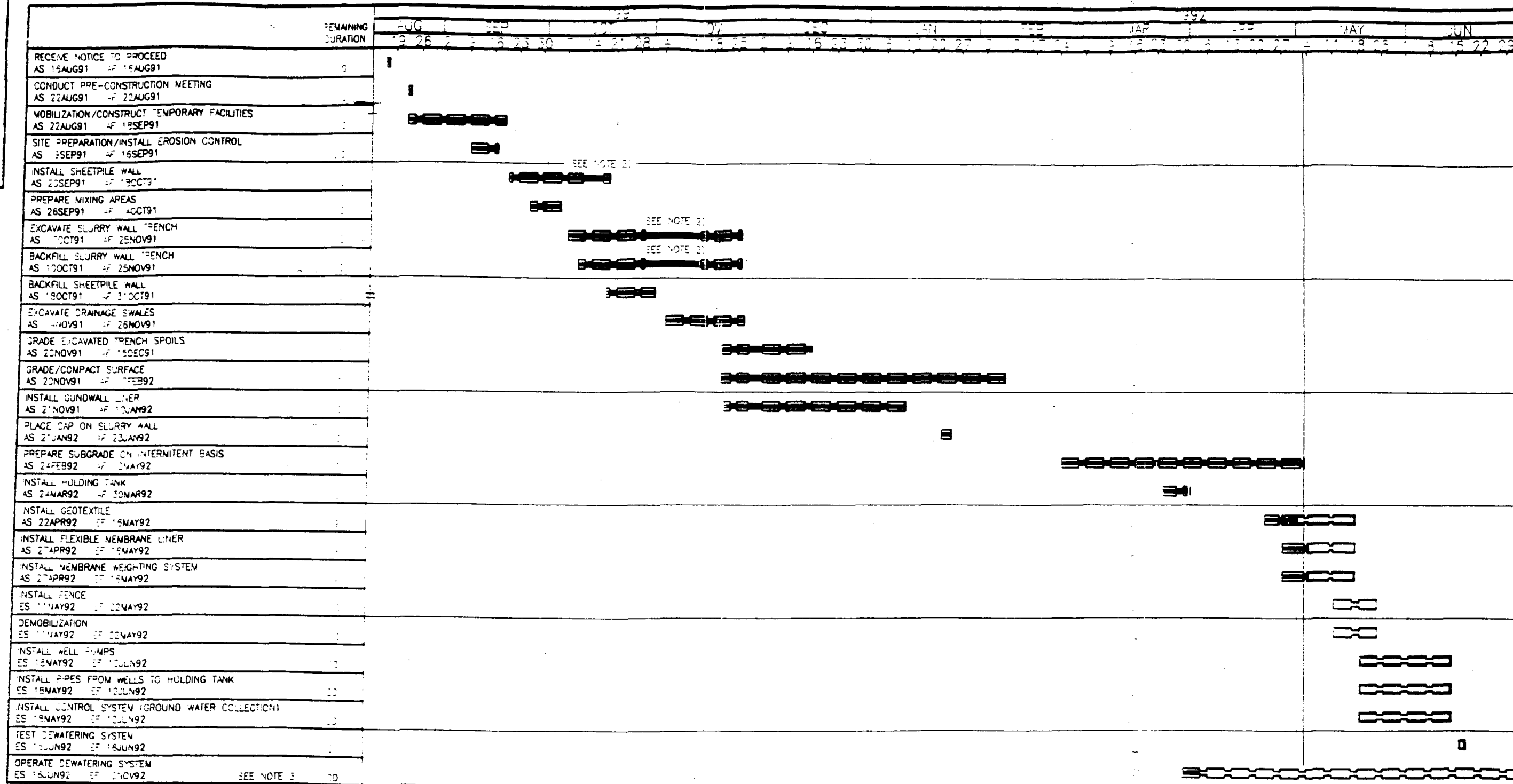
SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
136	1.75	1.06	-0.69	1.08	0.02
137	1.38	1.25	-0.13	1.44	0.19
138	1.25	1.06	-0.19	1.08	0.02
139	1.25	1.06	-0.19	1.08	0.02
140	1.13	0.94	-0.19	1.08	0.14
141	1.25	0.88	-0.37	1.08	0.2
142	1.13	0.94	-0.19	1.08	0.14
143	1	0.75	-0.25	1.44	0.69
144	0.88	0.75	-0.13	0.96	0.21
145	1	0.75	-0.25	0.96	0.21
146	1	0.75	-0.25	0.84	0.09
147	1.13	0.75	-0.38	0.84	0.09
148	1.25	1	-0.25	1.08	0.08
149	1.13	1.13	0	1.2	0.07
150	1.5	1	-0.5	1.32	0.32
151	1.75	1.5	-0.25	1.68	0.18
152	1.88	1.63	-0.25	1.68	0.05
153	2.25	1.81	-0.44	2.04	0.23
154	-0.25	-0.19	0.06	-0.12	0.07
155	3	1.94	-1.06	2.4	0.46
156	-0.5	-0.63	-0.13	-0.72	-0.09
157	3.63	3	-0.63	2.88	-0.12
158	3.63	3.5	-0.13	3.24	-0.26
159	3.63	3.38	-0.25	3	-0.38
160	-0.13	-0.06	0.07	-0.36	-0.3
161	3.3	3.38	0.08	3	-0.38
162	-0.25	-0.13	0.12	-0.24	-0.11
163	3.38	3.25	-0.13	2.76	-0.49
164	0.75	0.75	0	0.96	0.21
165	3.75	3.38	-0.37	3.24	-0.14
166	4	3.88	-0.12	3.6	-0.28
167	0.38	0.06	-0.32	-0.36	-0.42
168	4.63	3.63	-1	4.2	0.57
169	4.63	4.38	-0.25	3.84	-0.54
170	0.38	0.19	-0.19	-0.24	-0.43
171	3.88	4.19	0.31	3.96	-0.23
172	3.5	3.38	-0.12	3.12	-0.26
173	3.38	3.06	-0.32	3.12	0.06
174	3.25	3	-0.25	3	0
175	3.25	2.94	-0.31	2.52	-0.42
176	3.5	3.13	-0.37	2.28	-0.85
177	3.88	3.13	-0.75	2.88	-0.25
178	3.5	3.38	-0.12	3.12	-0.26
179	3.38	3.13	-0.25	2.88	-0.25
180	3.5	3.13	-0.37	3	-0.13

SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
181	0	-0.06	-0.06	-0.24	-0.18
182	4.63	3.19	-1.44	3.72	0.53
183	5.63	4.19	-1.44	3.84	-0.35
184	-0.13	0	0.13	-0.24	-0.24
185	5.5	5.75	0.25	5.16	-0.59
186	5.5	5.25	-0.25	4.8	-0.45
187	-0.5	-0.38	0.12	-0.24	0.14
188	4.63	5.13	0.5	4.92	-0.21
189	4.75	4.5	-0.25	3.72	-0.78
190	0.25	4.44	4.19	3.96	-0.48
191		0.06	0.06	-0.36	-0.42
192	4	3.88	-0.12	3.84	-0.04
193	3.88	3.75	-0.13	3.36	-0.39
194	4	3.63	-0.37	3.36	-0.27
195	4.25	3.81	-0.44	3.36	-0.45
196	4	3.88	-0.12	3.36	-0.52
197	3.56	3.69	0.13	3.48	-0.21
198	3.25	3.44	0.19	3.24	-0.2
199	3.13	3.13	0	2.88	-0.25
200	3.63	3.13	-0.5	2.64	-0.49
201	2.5	2.63	0.13	2.4	-0.23
202	2.38	2.13	-0.25	2.16	0.03
203	2.5	2.19	-0.31	2.28	0.09
204	2.44	2.38	-0.06	2.76	0.38
205	2.38	2.38	0	2.4	0.02
206	2.5	2.31	-0.19	2.16	-0.15
207	2.63	2.38	-0.25	2.16	-0.22
208	2.63	2.5	-0.13	2.64	0.14
209	2.75	2.5	-0.25	2.52	0.02
210	2.75	2.75	0	2.64	-0.11
211	2.88	2.69	-0.19	2.64	-0.05
212	2.88	2.69	-0.19	2.64	-0.05
213	2.63	2.5	-0.13	2.64	-0.1
214	2.63	2.44	-0.19	2.4	-0.28
215	2.5	2.25	-0.25	2.16	0.03
216	2.63	2.25	-0.38	2.28	0.15
217	2.5	2.13	-0.37	2.4	0.27
218	2.25	2.25	0	2.4	-0.33
219	2.25	2.38	0.13	1.92	-0.46
220	2.38	2	-0.38	1.92	0.28
221	2.5	2.19	-0.31	2.28	0.21
222	2	1.75	-0.25	2.4	0.29
223	1.69	1.75	0.06	2.04	-0.07
224	1.5	1.5	0	1.68	0.18
225	1.5	1.5	0	1.68	0.18

SHEETPILE WALL DEFLECTIONS					
SHEET NO.	1/30/92	2/27/92	CHANGE	4/10/92	CHANGE
226	1.5	1.38	-0.12	1.56	0.18
227	1.63	1.38	-0.25	1.56	0.18
228	1.5	1.75	0.25	1.68	-0.07
229	1.5	1.13	-0.37	1.44	0.31
230	1.5	1.38	-0.12	1.44	0.06
231	1.13	1.19	0.06	1.32	0.13
232	1.38	1.25	-0.13	1.08	-0.17
233	1.25	1.07	-0.18	1.32	0.25
234	1	1.07	0.07	1.32	0.25
235	1	0.88	-0.12	0.96	0.08
236	0.88	0.5	-0.38	0.96	0.46
237	0.5	0.63	0.13	0.96	0.33
238	0.38	0.5	0.12		-0.5
239	0.5	0.38	-0.12		-0.38
240	0.38	0.38	0	0.84	0.46
241	0.38	0.25	-0.13	0.36	0.11
242	0.25	0.13	-0.12	0.36	0.23
243	0.13	0.19	0.06	0.36	0.17
244	0.25	0.25	0	0.24	-0.01
245	0.13	0.13	0	0.36	0.23
246	0.25	0	-0.25	0.36	0.36
247	0.13	0	-0.13	0.48	0.48
248	0.06		-0.06	0.24	0.24
249	0		0	0.12	0.12
250		0	0	0.36	0.36
251		0	0	0	0
252			0	0	0
253	0.13		-0.13	0.36	0.36
254	0.06		-0.06	0.48	0.48
255	0		0		0
256	0		0		0
257	0		0		0
258	0		0		0
259	0		0		0
Notes:					
1	All deflections are measured as inches from vertical at the top of the wall.				
	No entry indicates no measurement was taken on that date.				
2	A negative deflection change indicates movement of the top of the wall away from Peach Island Creek.				
3	H-piles are located in front of sheets 50, 53, 55, 58, 154, 156, 160, 162, 164, 167, 170, 181, 184, 187, & 191.				
4	The changes noted are between the current and previous measurements.				

FIGURE 1
PROJECT SCHEDULE

DRAWING NUMBER 90-198-B72

**LEGEND:**

- PASSIVE
 ACTIVITY BAR
 CRITICAL ACTIVITY
 PROGRESS BAR

NOTES:

- THE SCHEDULE FOR TASKS SHOWN IN 1992 IS BASED ON THE UNILATERALLY REQUIRED SCHEDULE MILESTONES GIVEN IN THE EPA'S MARCH 23, 1992 LETTER.
- WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND/OR DEFLECTED SHEETPILE PROBLEM.
- REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

Δ	3-6-92	UPDATED 4-6-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WLM	M.K.W.	J.E.M.
Δ	3-28-92	REVISED PER EPA UNILATERAL SCHEDULE MILESTONES	J.M.R.	M.K.W.	J.E.M.
Δ	2-28-92	REVISED PER PLAN OF ACTION IN LETTER DATED 2-28-92	J.P.R.	M.K.W.	J.E.M.
Δ	3/8/92	UPDATED 5-6-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.M.R.	ME	JM
No.	DATE	ISSUE / REVISION	DIRL	BY	BY

APRIL PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR
COOPERATING PRP GROUP

Canonie Environmental

DATE: 4-1-92	FIGURE 1	DRAWING NUMBER 90-198-B72
SCALE: NONE		

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

June 5, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
MAY 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance/Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between May 1, 1992 and May 31, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey. This QA/QC report is organized as follows:

- o Section 2.0 - Work Completed;
- o Section 3.0 - Work Scheduled for June 1992;
- o Section 4.0 - Changes to Project Schedule;
- o Section 5.0 - Other QA/QC Activity;

2.0 - Work Completed

During the period from May 1, 1992 to May 31, 1992, Canonie made progress in the following areas:

- o Section 2.1 - Site Grading Activity;
- o Section 2.2 - Infiltration Barrier Construction;
- o Section 2.3 - Site Fence Work;
- o Section 2.4 - Demobilization Activity.

100766

CanonieEnvironmental

2.1 - Site Grading Activity

Grading during May was limited to continued backfilling of the anchor trench with crushed stone from the staging area. Backfill was also placed along an exposed area along Peach Island Creek which was then covered with an HDPE liner along two thirds of the creek to minimize erosion.

There was no specific QA/QC testing required for this activity. Canonie performed this work in accordance with the generally accepted construction practices for grading, backfilling, and erosion control.

2.2 - Infiltration Barrier Construction

Placement of the infiltration barrier was completed this month. Canonie performed all required QA/QC testing and the results for the materials and installation met or exceeded the criteria for this project. Results are Attachments 1 to 6. Placement of the water filled ballast tubes for weighting the infiltration barrier continued across areas where the this barrier was installed.

2.4 - Site Fence Work

No specific QA/QC testing was required for this activity. As erection of the perimeter fence continued this month, Canonie ensured that materials used and the installation procedures met the requirements of the Technical Specifications Section 02831 and the details provided in Modification Request 17, dated December 10, 1991.

2.5 - Demobilization Activity

Demobilization of the CAT 950 and D68 from the site occurred after completion of the required decontamination activity. Utilities to the decon trailer were disconnected and this trailer was removed from the site. All remaining office trailers were demobilized from the site except for Langan's.

3.0 - Work Scheduled for June 1992

The work items scheduled for the month of June 1992 include the following:

- o Complete the new perimeter fencing;
- o Complete installation of the dewatering system;
- o Complete on-site work by June 15, 1992.

4.0 - Changes to Project Schedule

At this time, there are no changes to the project schedule which would affect the date of final on-site work of June 15, 1992. Other unplanned contingencies may arise. A project schedule has been included with this report as Figure 1.

5.0 - Other QA/QC Activity

QA/QC testing of the materials and installation of the infiltration barrier indicated all criteria for this project were met or exceeded. Results of these tests for this month are included with this report as Attachment 7. Visual inspection of the completed infiltration barrier shows minor perforations from the surveyor's transit and a minor repair necessary of the boot around piezometer P-8 which Canonie will address prior to leaving the site.

Canonie prepared and sent to Langan this month a letter which showed that the continuity of the of the Gundwall sheets had been confirmed. This letter was prepared and sent to Langan this month.

SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Frank Gontowski - Canonie
Jim Semple - Canonie

100768

CanonieEnvironmental

ATTACHMENT 1
TRIAL WELD INFORMATION

TRIAL WELD INFORMATION

Page 4 of 4

PROJECT NAME: SCP CARLSTADT

PROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: 60 ml HDPE

[illegible]

TRIAL WELD INFORMATION

Page 3 of 4PROJECT NAME: SCP-CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/INCH			PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT/MIN	WHEEL SETTING					
				SET	PYRO	SET	PYRO		SET	PYRO							
5-11-92 1512	80/107	BF	Ex #1	240		300		120					131	117	127	130	EXT 9 & 10
5-12-92 0830	58/61	BF	Ex #1	240		300		"					105	98	178	176	EXT 11 & 12
5-12-92 0830	60/73	TK	1533					"	700		7	.035	140/128	134/132	164	162	DST 53 & 54
5-12-92 1330	74/101	BF	Ex #1	240		300		"					83	100	132	131	EXT 13 & 14
5-12-92 1330	75/101	TK	1533					"	700		7	.035	102/108	116/113	125	121	DST 55 & 56
5-13-92 0810	61/65	PK	Ex #1	240		300		"					80	81	146	152	EXT 15 & 16
5-13-92 0810	61/65	JM	Ex #2	240		300		"					82	80	147	152	EXT 17 & 18
5-13-92 1315	74/86	PK	Ex #1	240		300		"					88	91	143	142	EXT 19 & 20
5-13-92 1315	74/86	JM	Ex #2	225		300		"					79	84	139	130	EXT 21 & 22
5-14-92 1020	75/96	TK	1533					"	200		8	.035	110/116	108/112	126	124	DST 57 & 58
5-14-92 0815	75/96	JK	Ex #2	240		300		"					102	108	127	139	EXT 23 & 24
5-14-92 0820	75/111	BF	Ex #1	240		300		"					79	82	121	123	EXT 25 & 26
5-14-92 1330	83/116	JK	Ex #2	225		300		"					104	97	120	120	EXT 27 & 28
5-14-92 1340	83/116	BF	Ex #1	240		250		"					92	99	122	127	EXT 29 & 30

B-11

TRIAL WELD INFORMATION

PROJECT NAME: SCP-CARLSTADTPROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: _____

DATE/ TIME	AMBIENT TEMP / LINER	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH			PASS/ FAIL	COMMENTS
				BARREL TEMP(°C)		PREHEAT TEMP(°C)		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING					
				SET	PYRO	SET	PYRO		SET	PYRO							
5-4-92 0817	56/70	BF	EXT #1	240		300		120					85	93	159	165	EXT #1 + 2
5-4-92 1336	60/67	"	"	"		"		"					99	108	150	158	EXT #3 + 4
5-5-92 0830	48.3/49.1	TK	1533					"	700		7	.075	134/150	117/134	185	184	DST # 31 + 32
5-5-92 0830	48.3/49.1	JR	1622					"	"		7	"	136/127	132/127	182	181	DST # 33 + 34
5-5-92 1347	56/76	TK	1533					"	"		7	"	130/137	130/142	157	149	DST # 35 + 36
5-5-92 1330	56/76	JR	1622					"	"		7	"	143/129	138/133	157	152	DST # 37 + 38
5-6-92 0815	54/60	TK	1533					"	"		7	"	140/151	142/128	176	177	DST # 39 + 40
5-6-92 1330	62/94	"	"					"	"		7	"	125/112	127/139	142	127	DST # 41 + 42
5-7-92 1335	58/84	BF	EXT #1	240		300		"					97	110	169	173	EXT # 5 + 6
5-8-92 0820	61/50	TK	1533					"	700		7	.035	135/152	125/137	178	186	DST # 43 + 44
5-11-92 0745	58/63	TK	"					"	"		7	"	123/113	120/111	157	165	DST # 45 + 46
5-11-92 0744	58/63	JR	1622					"	"		7	"	129/136	127/101	166	169	DST # 47 + 48
5-11-92	60/66	BF	EXT #	240		300							116	126	144	136	EXT #
5-11-92 1330	80/107	JR	1622						700		8	.035	119/120	102/114	140	134	DST # 49 + 50
5-11-92 1330	80/107	TK	1533						"		7	"	138/124	107/114	135	140	DST # 51 + 52

TRIAL WELD INFORMATION

Page 1 of 4PROJECT NAME: SCP - CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 6061 HDPE

DATE/ TIME	AMBIENT TEMP LINER	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH			PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING					
				SET	PYRO	SET	PYRO		SET	PYRO							
4-27-92 1040		TK/JR	1533					120	700		7	.035	123/126	112/121	163	132	DST # 1 & 2
4-27-92 1410		TK	"					"	700		7	"	112/115	111/105	131	130	DST # 3 & 4
4-28-92 0930	47/50	"	"					"	700		7	"	114/124	131/136	177	173	DST # 7 & 8
4-28-92 0940	51/50	JR	1622					"	700		7	"	132/129	135/127	164	169	DST # 9 & 10
4-28-92 1300	6/70	TK	1533					"	700		7	"	118/121	129/121	144	141	DST # 11 & 12
4-28-92 1310	7/71	JR	1622					"	700		7	"	110/116	125/140	138	140	DST # 13 & 14
4-29-92 0530	72	TK	1533					"	700		7	"	145/143	131/141	164	170	DST # 15 & 16
4-29-92 0603	69/63	"	"					"	700		8	"			134	137	DST # 17 & 18
4-27-92		TK/JR	"					"	700		7	"	111/107	117/116		-	DST # 5 & 6
4-30-92 0800	56/63	TK	"					"	700		8	"	127/111	120/121	134	128	
4-30-92 1325	65/71	"	"					"	700		8	"	128/121	120/121	135	141	
5-1-92 0830	63/82	JR	1622					"	700		8	"	135/123	134/115	158	154	DST # 23 & 20
5-1-92 0830	63/82	TK	1533					"	700		8	"	144/132	139/128	154	165	DST # 21 & 22
5-1-92 1330	71/91	JR	1622					"	700		8	"	122/139	113/119	138	136	DST # 27 & 28
5-1-92 1320	71	TK	1533					"	700		8	"	113/107	118/106	110	129	DST # 29 & 30

ATTACHMENT 2
PANEL PLACEMENT FORM

PROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: 60 mil HDPE

[illegible]

PANEL PLACEMENT FORM

PROJECT NAME: SCP - CARLSTADT

PROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/ PANEL LOCATION
5-6-92 1520	49B	1910	131'	14.6'	North of 50B between 49A & 49C running W to E, along South trench
5-11-92 0830	51	"	230'	"	Running S to N along butt seam of panels 29 to 43
0835	52	"	224'	"	Running S to N, west of panel 51
0851	53	1913	224'	"	Running S to N, west of panel 52
0856	54	"	224'	"	" " " " " " " " 53
0905	55	"	224'	"	" " " " " " " " 54
0910	56	"	224'	"	" " " " " " " " 55
0915	57A	"	2	"	" " " " " " " " 56, North of panel 50B
1013	57B	2002		"	Running S to N, west of panel 56, North South of panel 57A
1018	58	"	225'	"	Running S to N, west of panel 57AB
1030	59	"	225'	"	" " " " " " " " 58
1038	60	"	226'	"	" " " " " " " " 59
1600	61	"	227'	"	Running W to E, South of 62AB along west trench
1607	62A	"	150'	"	Running W to E, North of panel 61, east of 62B
1625	62B	1909	77'	"	Running W to E, North of panel 61, west of 62A
1633	63	"	227'	"	Running W to E, North of panel 62AB, along west trench

PANEL PLACEMENT FORM

PROJECT NAME: SCP - CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/ PANEL LOCATION
5-6-92 0845	39	2001	285'	14.6'	South of panel 38, running W to E, east portion of property along trench
0851	40	"	282'	"	South of panel 39, running W to E, east portion of property along trench
1351	41A	"	244'	"	South of panel 40 running W to E, east of panel 41B, along east trench
1425	41B	2004	34'	"	South of panel 40 running W to E, west of panel 41A,
1445	42	1903	268'	"	South of 41AB running W to E, along east trench
1500	43	"	268'	"	South of 42 running W to E, along east trench
1515	44	"	265'	"	South of 43 running W to E, along east trench
1530	45	"	264'	"	South of 44 running W to E, along east trench
5-6-92 0903	46	1911	262'	"	" " 45 " " " " " " "
0914	47	"	259'	"	" " 46 " " " " " " "
1145	49A	1910	151'	"	" " 48 " " " " " " "
1150	50A	1911	151'	"	" " 49A " " " " " " "
1340	50C	"	275'	"	South of 49C running W to E, along South trench
1400	49C	1910	200'	"	North of 50C running W to E, along west trench
1433	48	"	254'	"	South of 47 running W to E, along east trench
1517	50B	"	46'	"	South of 49B between 50A & 50C running W to E along South trench

100778

PAGE 3 OF 6

PANEL PLACEMENT FORM

PROJECT NAME: SCP-CARLESTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/ PANEL LOCATION
4-30-92 1434	26	1914	242'	14.6'	W of panel 25 1 th panel running S to N along west corner of NE panels
5-1-92 0755	27A	1920	242'	"	W of panel 26 east of panel 28 cut diagonally to produce panel 27B North of panel 27B
0758	27B	"	75'	"	W of panel 26 east of panel 28 from diagonally cut portion of 27A South of panel 27A
0802	28	"	242'	"	W of panel 27 west most panel at Northwest corner running S to N along swale & anchor trench
0816	29	"	282'	"	2 th panel running W to E from North side portion South of panel 19 along east anchor trench
0828	30	"	282'	"	South of panel 29 running W to E at east edge of property along E anchor trench
1028	31	1917	290'	"	South of panel 30 running W to E at E edge of property along E anchor trench
0840	32A	1920	104'	"	South of panel 31 running W to E at East portion of property East of panel 32B along E anchor trench East of dumpster
1043	32B	1917	163'	"	South of panel 31 running W to E at East portion of property west of panel 32A west of dumpster
1450	33	"	295'	"	South of panel 32 running W to E at E portion of property along east anchor trench
1458	34A	"	230'	"	South of panel 33 running W to E at E portion of property along E anchor trench east of 34B
1510	34B	2004	65'	"	South of panel 33 running W to E at E portion of property, west of 34A
5-5-92 0735	35	"	295'	"	South of panel 34AB running W to E, east portion of property along anchor trench
0745	36	"	294'	"	South of panel 35 running W to E, east portion of property along trench
0756	37	"	290'	"	South of panel 36 running W to E, east portion of property along trench
0830	38	2001	284'	"	South of panel 37 running W to E, east portion of property along trench

PANEL PLACEMENT FORM

 PROJECT NAME: SCP CARLSTADT

 PROJECT NUMBER: 90-198

 MATERIAL DESCRIPTION: 6 mil HDPE

DATE/ TIME	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/ PANEL LOCATION
4-28-92 1040	1B	1905	115	14.4	1st Panel running W to E from West Side along North side
1050	2B	"	115	"	2nd Panel running W to E from West side along North side South of 1B
1-11-93 0815	14	"	304'	"	14th Panel running W to E from North side east corner South of 13
0810	15	2003	299'	"	15th Panel running W to E from North side east corner South of 14
0850	16	"	301'	"	16th Panel running W to E from North side east corner South of 15
1123	17	"	302'	"	17th Panel running W to E from North side east corner South of 16
1133	18A	"	174'	"	18th Panel running W to E from North side eastmost panel South of 17 east of 18B
1325	18B	1904	127'	"	18th Panel running W to E from North side west of panel 18A South of 17 west of 18A
1335	19	"	309'	"	19th Panel running W to E from North side east corner South of 18
4-30-92 0830	20	"	245'	"	1st Panel running S to N along west corner of Northeast panels
0835	21	"	241'	"	W of panel 20 2nd panel running S to N along west corner of NE panels
0838	22A	"	153'	"	W of panel 21 3rd panel running S to N along west corner of NE panels Northern portion of 22AB
0840	22B	1914	89'	"	W of panel 21 4th 3rd panel running S to N along west corner of NE panels Southern portion of 22AB
0900	23	"	242'	"	W of panel 22AB 4th panel running S to N along west corner of NE panels
1400	24	"	242'	"	W of panel 23 5th panel running S to N along west corner of NE panels
1415	25	"	242'	"	W of panel 24 6th panel running S to N along west corner of NE panels

100780

PAGE 1 OF 6

PANEL PLACEMENT FORM

PROJECT NAME: SEP-CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 6 mil HDPE

DATE/ TIME	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/ PANEL LOCATION
4/27/92 0800	1	1918	255'	14.6'	W to E 1st Panel running W to E from N side running along North grade and center line
0815	2	"	255'	"	W to E 2nd Panel running W to E from N side south of panel 1
1350	3	"	262'	"	W to E 3rd Panel running W to E from N side south of panel 2
1410	4A	"	235'	"	W to E 4th Panel running W to E from N side Northeast corner south of panel 3 east of 4B
1443	4B	1912	32'	"	W to E 4th Panel running W to E from N side Northwest corner south of panel 3 west of 4A
1457	5	"	274'	"	W to E 5th Panel running W to E from N side south of 4AB
4/28/92 0800	6	"	285'	"	W to E 6th Panel running W to E from N side south of 5
0808	7	"	285'	"	W to E 7th Panel running W to E from N side south of 6
0815	8A	"	185'	"	W to E 8th Panel running W to E from N side Northeast corner south of 7 east of 8B
0837	8B	1915	99'	"	W to E 8th Panel running W to E from N side Northwest corner south of 7 west of 8A
0844	9	"	287'	"	W to E 9th Panel running W to E from N side south of 8AB
0850	10	"	291'	"	W to E 10th Panel running W to E from N side south of 9
0900	11	"	291'	"	W to E 11th Panel running W to E from N side south of 10
0905	12A	"	90'	"	W to E 12th Panel running W to E from N side Northeast corner south of 11 east of 12B
1000	12B	1905	204'	"	W to E 12th Panel running W to E from N side Northwest corner south of 11 west of 12A
1010	13	"	295'	"	W to E 13th Panel running W to E from N side south of 12AB

ATTACHMENT 3
PANEL SEAMING FORM

PANEL SEAMING FORM

PROJECT NAME: SCP-CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5-11-92 1345	51/ BUTT	51/ (29-44)	228'	TK	1533	700	Sunny	0-5mph	60	P	
1415	57AB/ 58	57AB/ 58	225	JR	1622	"	"	"	11	P	
1450	58/59	58/59	225	"	"	"	"	"	62	P	DS#15 after 81' of seam
1456	51-57A/ 19-24	51-57A/ 19-24	100	TK	1533	"	"	"	"	P	
1557	59/60	59/60	225'	JR	1622	"	"	"	11	P	
1606	49BC/ 61	49BC/ 61	227'	TK	1533	"	"	"	11	P	
1638	62AB/ 63	62AB/ 63	227'	JR	1622	"	"	"	61	P	
1647	61/ 62AB	61/ 62AB	227'	TK	1533	"	"	"	11	P	
1659	62A/ 62B	62A/ 62B	14.6'	JR	1622	"	"	"	11	P	
5-12-92 0827	63/64	63/64	227'	TK	1533	"	"	"	58	P	DS#16 62' before end of seam
0925	64/ BUTT	64/ 51-60	227'	"	"	"	"	"	63	P	
1122	65/66	65/66	188'	"	"	"	"	"	11	P	
1340	66/67	66/67	169'	"	"	"	"	"	75	P	
1430	60/65	60/65	188'	"	"	"	"	"	70	P	
1510	67/69A	67/69A	166'	"	"	"	"	"	73	P	DS#17 3' before end of seam
161	69A/ 18	69A/ 69A	71'	"	"	"	"	"	68	P	

100784

PAGE 5 OF 7

PANEL SEAMING FORM

PROJECT NAME: SCP-CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5-6-92 1353	49A/ 50A	49A/ 50A	151'	TK	1533	700	P Cloudy	0-5 mph	60	P	
1427	49C/ 50C	49C/ 50C	200'	"	"	"	"	"	65	P	
1510	49B/ 49C	49B/ 49C	14.6'	"	"	"	"	"	54	P	
1552	48/ 49A	48/ 49A	151'	"	"	"	"	"	"	P	DS #13 after 75' of seam
1625	50B/ 50C	50B/ 50C	14.6'	"	"	"	"	"	"	P	
1643	50A/ 50B	50A/ 50B	14.6'	"	"	"	"	"	"	P	
1650	49B/ 50BC	49B/ 50BC	131'	"	"	"	"	"	"	P	
5-8-92 0830	49A/ 49B	49A/ 49B	14.6'	TK/JR	"	"	P Cloudy Drizzle	"	54	P	
0835	48/ 49B	48/ 49B	131'	"	"	"	"	"	"	P	
5-11-92 1000	51/ 52	51/ 52	224'	TK	"	"	Sunny	"	54	P	
1050	52/ 53	52/ 53	224'	"	"	"	"	"	"	P	
1051	54/ 55	54/ 55	224'	JR	1622	"	"	"	"	P	
1129	53/ 54	53/ 54	224'	TK	1533	"	"	"	57	P	DS #14 53' before end of seam
1129	55/ 56	55/ 56	224'	JR	1622	"	"	"	"	P	
1325	57A/ 57B	57A/ 57B	14.6'	"	"	"	"	"	60	P	
1335	56/ 57AB	56/ 57AB	224'	"	"	"	"	"	"	P	

PANEL SEAMING FORM

PROJECT NAME: SCP. CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5-5-92 0901	34AB/ 35	34AB/ 35	290'	TK	1533	700	Cloudy	0-5mph	48	P	
0920	38A/ 39	38A/ 39	135'	JR	1622	"	Rainy	"	"	P	West of Piezometer
1030	35/ 36	35/ 36	292'	TK	1533	"	"	"	"	P	
1034	37/ 38	37/ 38	280'	JR	1622	"	"	"	"	P	DS #9, 8' from end of seam
1118	36/ 37	36/ 37	282'	TK	1533	"	"	"	"	P	
1124	39/ 40	39/ 40	282'	JR	1622	"	"	"	"	P	
1350	38B/ 39	38B/ 39	149'	"	"	"	Cloudy	"	"	P	East of piezometer
1355	41A/ 41B	41A/ 41B	14.6'	TK	1533	"	"	"	55	P	
1410	40/ 41AB	40/ 41AB	278'	"	"	"	"	"	"	P	DS #10 after 26' of seam
1610	41AB/ 42	41AB/ 42	268'	"	"	"	"	"	"	P	
1616	42/ 43	42/ 43	268'	JR	1622	"	"	"	"	P	
1650	43/ 44	43/ 44	265'	"	"	"	"	"	"	P	DS #11 7' from end of seam
1654	44/ 45	44/ 45	264'	TK	1533	"	"	"	"	P	
5-6-92 1005	45/ 46	45/ 46	262'	"	"	"	"	"	52	P	DS #12 after 216' of seam
1100	46/ 47	46/ 47	259'	"	"	"	"	"	54	P	
1455	47/ 48	47/ 48	254'	"	"	"	"	"	50	P	

100786

PAGE 3 OF 7

PANEL SEAMING FORM

PROJECT NAME: SCP-CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5-1-92 0853	27/28	27/28	242'	JR	1622	700	Sunny	5 mph	63	P	
0912	19/29	19/29	282'	TK	1533	"	"	-	63	P	
1059	29/30	29/30	282'	"	"	"	"	-	70	P	DS #7 after 150' of seam
1104	27A/27B	27A/27B	78'	JR	1622	"	"	-	73	P	
1120	27B/26	27B/26	75'	"	"	"	P Cloudy	-	73	P	
1120	27A/26	27A/26	135'	"	"	"	"	-	73	P	
1120	28/26	28/26	32'	"	"	"	"	-	73	P	
1335	30/31	30/31	282	TK	1533	"	"	-	73	P	
1425	32A/31	32A/31	104'	"	"	"	"	-	73	P	
1502	32B/31	32B/31	163'	"	"	"	"	-	73	P	
1504	32B/33	32B/33	163'	JR	1622	"	"	-	"	P	
1530	34A/34B	34A/34B	14.6'	TK	1533	"	"	-	"	P	
1543	32A/33	32A/33	104'	"	"	"	"	-	"	P	
1600	33/34AB	33/34AB	295'	"	"	"	"	-	"	P	DS #8 45' before end of seam
5-1-92 1427	2A/2B	2A/2B	14.6	JR	1622	"	"	-	"	P	

PANEL SEAMING FORM

PROJECT NAME: SCP - CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

✓B

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP(°F)	DES TEST P/F	COMMENTS
4-29-92 0900	13/14	13/14	295'	TK	1533	700	Sunny	5-10 mph	56	P	
1010	14/15	14/15	299'	JR	"	"	"	"	60	P	
1125	15/16	15/16	299'	TK	"	"	"	"	73	P	
1330	16/17	16/17	301'	"	"	"	"	"	69	P	DS # 4 after 90' of seam
1423	18A/18B	18A/18B	14.6'	"	"	"	"	"	65	P	
1433	17/18AB	17/18AB	302'	"	"	"	"	"	"	P	
1600	18AB/19	18AB/19	301'	"	"	"	"	"	58	P	
4-30-92 0856	20/21	20/21	241'	"	"	"	"	—	56	P	DS # 5 after 160' of seam
1017	22A/22B	22A/22B	14.6'	"	"	"	cloudy	—	60	P	
1026	21/22AB	21/22AB	241'	"	"	"	"	5-10 mph	"	P	
1111	22AB/23	22AB/23	241'	"	"	"	"	"	"	P	
1327	20B/BUTT	20B/BUTT	100	"	"	"	"	"	65	P	
1400	20A/BUTT	20A/BUTT	145'	"	"	"	"	"	60	P	
1444	23/24	23/24	242'	JR	"	"	"	"	56	P	DS # 6 after 175' of seam
1555	24/25	24/25	242'	TK	"	"	"	"	53	P	
16	25/26	25/26	242'	JR	"	"	"	"	"	P	

100788

PAGE 1 OF 7

PANEL SEAMING FORM

PROJECT NAME: SCP - CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP(°F)	DES TEST P/F	COMMENTS
4-27-92 1040	1/2	1/2	255	TK	1533	700	P-cloudy	5 mph	59	P	
1445	2/3	2/3	255	"	"	"	Sunny	"	66	P	
1546	3/4AB	3/4AB	262	"	"	"	"	"	66	P	
1536	4A/4B	4A/4B	14.6	"	"	"	"	"	66	P	
1629	4AB/5	4AB/5	267	"	"	"	"	"	62	P	DS #1
4-28-92 1014	8A/8B	8A/8B	14.6	"	"	"	"	"	47	P	
1035	5/6	5/6	274	JR	1622	"	Pcloudy	"	50	P	
1035	7/8AB	7/8AB	284	TK	1533	"	"	"	50	P	
1126	1B/2B	1B/2B	115	JR	1622	"	Sunny	"	63	P	
1127	6/7	6/7	285	TK	1533	"	"	"	63	P	
1345	8AB/9	8AB/9	284	"	"	"	"	5 to 10 mph	60	P	
1346	9/10	9/10	287	JR	1622	"	"	"	60	P	
1435	10/11	10/11	291	TK	1533	"	"	"	65	P	DS # 2
1436	12A/12B	12A/12B	14.6	JR	1622	"	"	"	63	P	
1439	"/12AB	"/12AB	291	"	"	"	"	"	65	P	DS # 3
1527	12AB/13	12AB/13	294	TK	1533	"	Sunny Windy	5-10 mph w/gusts	56	P	

ATTACHMENT 4
NON-DESTRUCTIVE TESTING FORM

100790

NON-DESTRUCTIVE TESTING FORM

PAGE 5 OF 5

PROJECT NAME: SCP - CARLSTADT

PROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE		W.	TIME		P/F		
			START	END			START		END	
5-12-92 0900	61/62B	RK	30	30	0	0900	0905	P		
0800	62/63A	"	30	30	0	0800	0825	P		
0820	62/63B	"	30	30	0	0820	0825	P		
0818	62/63C	"	30	30	0	0818	0823	P		
0810	62/63D	"	30	30	0	0810	0818	P		
0910	63/64	"	30	30	0	0910	0950	P		
1139	21A/27B	"	30	30	0	1139	1146	P		
1141	1B/2B	"	30	30	0	1141	1146	P		
5-11-92 1630	59/60	JG	30	30	0	1630	1636	P		
5-13-92 0800	60/65	RK	30	30	0	0800	0804	P		
0800	65/66	"	30	30	0	0800	0804	P		
0801	66/67A	"	30	30	0	0801	0805	P		
0801	67A/69	"	30	30	0	0801	0805	P		
0802	68A/69A	"	30	30	0	0802	0806	P		
0809	66/67B	"	30	30	0	0809	0813	P		
0810	67B/69	"	30	30	0	0810	0818	P		
0819	69A/69	"	30	30	0	0819	0822	P		
0823	68B/69	"	30	30	0	0823	0830	P		
0815	69B/69	"	30	30	0	0815	0819	P		
1042	64/70	JG	30	30	0	1042	1048	P		
1101	70/71	"	30	29	-1	1101	1107	P		
1119	71/72	"	30	29.5	-1.5	1119	1126	P		
5-6-92 0827	40/41A	RK	29	28.5	-1.5	0820	0825	P		
5-15-92 0904	48C/49B	"	27	27	0	0904	0910	P		
-	49C/50C								P	VACUUM TESTED

NON-DESTRUCTIVE TESTING FORM

PAGE 4 OF 5

PROJECT NAME: SCP- CARLSTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING					VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME			
			START	END	W.	START	END	P/F	
5-6-92 0829	44/45	RK	30	30	0	0829	0833	P	
1050	45/46	JG	28.5	27.5	-1	1050	1055	P	
1142	46/47	"	30	30	0	1142	1150	P	
1020	47A/48	"	30	30	0	1530	1535	P	
1541	47B/48	"	29	28	-1	1541	1549	P	
1018	48/49A	"	28	28	0	1018	1023	P	
1451	49A/50A	"	29	28.5	-5	1451	1457	P	
1018	48B/49A	"	27	27	0	1018	1023	P	
1554	49B/50C	"	29.5	29.5	0	1554	1601	P	
1041	49B/50B	"	28	28	0	1041	1046	P	
1055	51/52	"	27	26	-1	1055	1101	P	
1136	52/53	"	26	26	0	1136	1144	P	
1356	53/54	"	29	27	-1	1356	1404	P	
1126	54/55	"	29	28	-1	1126	1144	P	
1356	55/56	"	30	30	0	1356	1406	P	
1506	57A/58	"	29	29	0	1506	1511	P	
1431	57B/56	V	30	30	0	1431	1436	P	
1444	57B/58	"	30	30	0	1444	1449	P	
5-15-92 0904	48C/49B	"	27	27	0	0904	0910	P	
5-11-92 1424	56/57A	"	30	29	-1	1424	1430	P	
5-11-92 1604	58/59	"	28	27	-1	1604	1610	P	
5-12-92 0806	61A/49B	RK	30	30	0	0806	0811	R	
0808	61B/49C	"	30	30	0	0808	0820	P	
0810	61C/49D	"	30	30	0	0810	0815	P	
	61/			3					

100792

✓B

NON-DESTRUCTIVE TESTING FORM

PAGE 3 OF 5PROJECT NAME: SCP-CARLSTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME		P/F		
			START	END	N	START	END			
5-1-92 1527	31/32B	RK	30	28	-2	1527	1531	P		
1524	33 / 32B	"	30	30	0	1524	1528	P		
5-15-92 0827	33/32A	"	30	30	0	0827	0837	P		
5-5-92 1410	34B/35B	"	30	30	0	1410	1415	P		
1432	30B/36B	"	30	29	-1	1432	1438	P		
1416	33B/34B	"	30	30	0	1416	1423	P		
1354	33C/34B	"	30	30	0	1359	1403	P		
1425	33A/34A	"	30	30	0	1425	1429	P		
1436	35/36A	"	30	30	0	1436	1440	P		
1428	34A/35	"	30	30	0	1428	1434	P		
1600	36C/37C	"	30	30	0	1600	1606	P		
1630	37B/38B	"	30	30	0	1630	1635	P		
1620	37C/38C	"	30	30	0	1620	1624	P		
1625	38/39B	"	30	30	0	1625	1632	P		
1635	39/40B	"	30	30	0	1635	1639	P		
1619	36A/37A	"	30	30	0	1619	1623	P		
1615	36B/37B	"	30	30	0	1615	1619	P		
1641	37A/38A	"	30	29	-1	1641	1645	P		
1638	39A/40A	"	30	30	0	1638	1644	P		
1636	38A/39A	"	30	30	0	1636	1641	P		
5-6-92 0812	40/41B	"	30	30	0	0812	0818	P		
0841	41A/42	"	30	30	0	0841	0845	P		
0843	41B/42	"	30	30	0	0843	0848	P		
0815	42/43	"	30	30	0	0815	0823	P		
0826	43/44	"	30	30	0	0826	0830	P		

NON-DESTRUCTIVE TESTING FORM

PAGE 2 OF 5
 PROJECT NAME: SCP-CARLSTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE		W.	TIME		P/F		
			START	END			START		END	
4-30-92 0834	15/16	RK	30	29	-1	0834	0850	P		
1506	16/17	"	28	27	-1	1506	1512	P		
0905	17/18A	"	29	29	-1	0905	0910	P		
1038	17/18B	"	30	30	0	1038	1044	P		
0833	18B/19	"	30	30	0	0833	0838	P		
1101	20/21	"	29	29	0	1101	1107	P		
1124	21B/22B	"	30	30	0	1124	1128	P		
1120	21A/22A	"	30	30	0	1120	1126	P		
1322	22A/23	"	30	30	0	1322	1336	P		
1321	22B/23	"	30	30	0	1321	1325	P		
1555	23/24	"	30	30	0	1555	1605	P		
1712	24/25	"	30	30	0	1712	1716	P		
1717	25/26	"	30	30	0	1717	1721	P		
5-1-92 1155	27A/28	"	30	29	-1	1155	1200	P		
1432	27B/26E	"	30	30	0	1432	1436	P		
1433	27B/26D	"	30	30	0	1433	1438	P		
1434	27A/26C	"	30	30	0	1434	1438	P		
1436	27A/26B	"	30	30	0	1436	1440	P		
1440	28/26A	"	30	30	0	1440	1444	P		
1325	19/29	"	30	29	-1	1325	1329	P		
1459	29/30A	"	30	30	0	1459	1503	P		
1458	29/30B	"	30	30	0	1458	1502	P		
1457	30/31B	"	30	30	0	1457	1501	P		
1507	30/31	"	30	30	0	1507	1511	P		
1511	31/									

100794

NON-DESTRUCTIVE TESTING FORM

PAGE 1 OF 5PROJECT NAME: SEPPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME		P/F		
			START	END	Δ	START	END			
4-28-92 1040	1/2	JG	30	30	0	1040	1045	P		
1040	2/3	"	27	27	0	1040	1046	P		
1055	3A/4A	"	27	26.5	-0.5	1055	1110	P		
1101	3B/4B	"	27	27	0	1101	1106	P		
1112	4A/5A	"	26	26	0	1112	1116	P		
1131	4A/5B	"	27	26.5	-0.5	1131	1135	P		
—	4A/5C	"							✓P	VACUUM TESTED @ 17 FT
1124	4B/5D	"	27	27	0	1124	1131	P		
1157	5/6	"	30	30	0	1157	1202	P		
1332	6/7	"	27	27	0	1332	1340	P		
1415	7/8A	"	30	29	-1	1415	1423	P		
1414	7/8B	"	30	29.5	-0.5	1414	1423	P		
1414	7/8C	"	30	29	-1	1414	1420	P		
1421	8A/9	"	28	28	0	1421	1427	P		
1421	8B/9	"	30	29.5	-0.5	1421	1427	P		
1509	9/10	"	30	30	0	1509	1515	P		
4-29-92 1453	10/11	RK	26	25	-1	1453	1457	P		
1607	11/12B	"	30	30	0	1607	1610	P		
1600	11/12B	"	30	30	0	1600	1605	P		
1609	11/12A	"	30	30	0	1609	1613	P		
1620	12A/13	"	30	30	0	1630	1634	P		
1627	12B/13	"	30	29	-1	1627	1631	P		
1650	13B/14B	"	30	30	0	1650	1656	P		
1647	13A/14A	"	30	30	0	1647	1653	P		
—	14B/15	"	28	28	0	1655	1700	P		

ATTACHMENT 5
REPAIR REPORT

100796

REPAIR REPORT

PAGE 8 OF 8

113
PROJECT NAME: SCP- CARLSTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

[illegible]

REPAIR REPORT

PAGE 7 OF 8PROJECT NAME: SCP- CARISTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
P-97	43/44	5/14/92	BF	Ex #1		TK	P	-----
P-98	32A/33	5/15/92		Ex #2		"	P	-----
P-99	2/3	5/4/92	BF	Ex #1		"	P	-----
3-1	28	5/13/92	"	"		"	P	-----
B-2	28	"	"	"		"	P	-----
B-3	12B/13/20	"	"	"		"	P	-----
B-4	4A	"	"	"		"	P	-----
3-5	13/14	"	"	"		"	P	-----
B-6	29/30	"	"	"		"	P	-----
B-7	57/58 24/25	"	"	"		"	P	-----
3-8	58	"	"	"		"	P	-----
B-9	58	"	"	"		"	P	-----
3-10	69A	5/14/92	"	"		"	P	-----
B-11	62A/63	"	"	"		"	P	-----
3-12	72	"	"	"		"	P	-----
B-13	47/48	"	"	"		"	P	-----

100798

REPAIR REPORT

PAGE 6 OF 8PROJECT NAME: SCP - CARLSTADTPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
P-81	66/67	5/13/92	BF	Ex #1		TK	P	-----
P-82	67/69A	"	"	"		"	P	-----
P-83	69A/68	"	"	"		"	P	-----
P-84	69A/68	"	"	"		"	P	-----
P-85	69A/68	"	"	"		"	P	-----
P-86	69AB/68	"	"	"		"	P	-----
P-87	69A/69B	"	"	"		"	P	-----
P-88	69A/69B	"	"	"		"	P	-----
P-89	57B/56	"	"	"		"	P	-----
P-90	32A/33	"	"	"		"	P	-----
P-91	36/51	"	"	"		"	P	-----
P-92	37/38	"	"	"		"	P	Deactivite #9
P-93	39/39/51	"	"	"		"	P	-----
P-94	48	5/14/92	"	"		"	P	-----
P-95	64/60/70	"	"	"		"	P	-----
P-96	65/65/72	"	"	"		"	P	-----

REPAIR REPORT

PAGE 5 OF 8PROJECT NAME: SCP - CarlstadtPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

FIELD TEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
1-65	49C/61	5/12/92	BF	Ex#1		TK	P	-----
1-66	62B/63	"	"	"		"	P	-----
2-67	63/64	"	"	"		"	P	-----
2-68	63/64	"	"	"		"	P	-----
2-69	51/64/ 44/45	"	"	"		"	P	-----
2-70	45/46/63	"	"	"		"	P	-----
2-71	53/54	"	"	"		"	P	Destructive #14
2-72	56/ 57AB	"	"	"		"	P	-----
2-73	57AB/58	"	"	"		"	P	-----
2-74	51-29/19	"	"	"		"	P	-----
2-75	18B	"	"	"		"	P	-----
2-76	60	"	"	"		"	P	-----
2-77	51A/58	5/13/92	"	"		"	P	-----
2-78	60	"	"	"		"	P	-----
2-79	60/65 27AB	"	"	"		"	P	-----
2-80	65/	"	"	"		"	P	-----

100800

REPAIR REPORT

PAGE 4 OF 8PROJECT NAME: SCP-CarlsbadPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 60 mil HDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
P-49	48/49A	5/12/92	BF	Ex #1		TK	P	-----
P-50	48/49A	"	"	"		"	P	Destructive # 13 -----
P-51	48/49AB	"	"	"		"	P	-----
P-52	49AB/50AB	"	"	"		"	P	-----
P-53	45/46	"	"	"		"	P	Destructive # 12 -----
P-54	49B/50BC	"	"	"		"	P	-----
P-55	41AB/42	"	"	"		"	P	-----
P-56	40/41AB	"	"	"		"	P	-----
P-57	48/49B	"	"	"		"	P	-----
P-58	49BC/61	"	"	"		"	P	-----
P-59	49BC/50C	"	"	"		"	P	-----
P-60	62/63	"	"	"		"	P	-----
P-61	49B/50C	"	"	"		"	P	-----
P-62	62AB/61	"	"	"		"	P	-----
P-63	62AB/63	"	"	"		"	P	-----
P-64	49C/61	"	"	"		"	P	-----

REPAIR REPORT

PAGE 3 OF 8PROJECT NAME: SCP - Carlstadt PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 60 mil HDPE

FIELD TEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
2-33	36/37	5/11/92	BF	Ex 1		TK	P	-----
2-34	36/37	"	"	"		"	P	-----
2-35	35/36	"	BF	Ex 1		"	P	-----
2-36	33/34A	"	"	"		"	P	covered by flap
2-37	34A/35	"	"	"		"	P	" " "
2-38	35/36	"	"	"		"	P	" " "
2-39	36/37	"	"	"		"	P	" " "
2-40	37/38	"	"	"		"	P	" " "
2-41	37/38	"	"	"		"	P	-----
2-42	38/39	"	"	"		"	P	covered by flap
2-43	39/40	"	"	"		"	P	" " "
2-44	39/40	"	"	"		"	P	-----
2-45	40/41	"	"	"		"	P	covered by flap
2-46	40/41	"	"	"		"	P	Destructive # 10
2-47	41/42	"	"	"		"	P	covered by flap
2-48	42/	"	"	"		"		" " "

100802

REPAIR REPORT

PAGE 2 OF 8PROJECT NAME: SCP - CarlstadtPROJECT NUMBER: 90-198MATERIAL DESCRIPTION: 40 mil HDPE

FIELD TEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
2-17	4A/5	5/4/92	BF	Ex 1		TK	P	-----
2-18	4A/5	"	"	"		"	P	<u>Destructive # 1</u> -----
2-19	7/8B	"	"	"		"	P	-----
2-20	7/8AB	5/7/92	"	"		"	P	-----
2-21	8AB/9	"	"	"		"	P	-----
2-22	10/11	"	"	"		"	P	<u>Destructive # 2</u> -----
2-23	11/12AB	"	"	"		"	P	-----
2-24	12AB/13	"	"	"		"	P	-----
2-25	16/17	"	"	"		"	P	<u>Destructive # 4</u> -----
2-26	17/18AB	"	"	"		"	P	-----
2-27	18AB/19	5/11/92	"	"		"	P	-----
2-28	29/30	"	"	"		"	P	<u>Destructive # 7</u> -----
2-29	33/34A 29/30	"	"	"		"	P	-----
2-30	33/34AB	"	"	"		"	P	<u>Destructive # 8</u> -----
2-31	33/34AB	"	"	"		"	P	-----
2-32	34AB/35	"	"	"		"	P	-----

REPAIR REPORT

PAGE 1 OF 8

PROJECT NAME: SCP- CARLSTADT PROJECT NUMBER: 90-198 MATERIAL DESCRIPTION: 40 mil HDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
P-1	2AB/3/20	5/4/92	BF	Ex 1	5/4/92	TK	P	-----
P-2	4B/5	"	"	"		"	P	-----
P-3	26/28	"	"	"		"	P	-----
P-4	26/27A/28	"	"	"		"	P	-----
P-5	26/27A	"	"	"		"	P	-----
P-6	23/24	"	"	"		"	P	<u>Destructive #6</u>
P-7	26/27A/27B	"	"	"		"	P	-----
P-8	26/27B	"	"	"		"	P	-----
P-9	26/27B	"	"	"		"	P	-----
P-10	22AB/23	"	"	"		"	P	-----
P-11	21/22AB	"	"	"		"	P	-----
P-12	20/21	"	"	"		"	P	-----
P-13	16/17/20	"	"	"		"	P	-----
P-14	"/12B	"	"	"		"	P	<u>Destructive #3</u>
P-15	4AB/5	"	"	"		"	P	-----
P-16	3/4	"	"	"		"	P	-----

ATTACHMENT 6
DESTRUCTIVE TEST LOG

DESTRUCTIVE TEST LOG

PAGE 1 OF 1

PROJECT NAME: SCP - CARLSTADT

PROJECT NUMBER: 90-198

MATERIAL DESCRIPTION: 40 mil HDPE

DATE	SAMPLE ID.	SEAM NO	MACH NO	OPER INITIALS	PEEL VALUES LBS. / INCH			SHEAR	PASS / FAIL	DATE TO LAB PKG SLIP NO	LAB PASS / FAIL	LOCATION / COMMENTS / Roll
4-29-92	DS # 1	4AB/5	1533	4-29-92 TK	101/113	95/106	159		P	4-29-92	P	Near MW-35 1912
"	2	10/11	"	4-28-92 TK	130/132	102/128	156		P	"	P	45' N Piez. 1915
"	3	11/12B	1622	4-29-92 JR	117/133	-	168		P	"	P	1915/1901
"	4	16/17	1533	4-29-92 TK	118/115	-	167		P	"	P	45' SE Piez. 2003
5-4-92	DS # 5	20/21	"	4-30-92 TK	120/127	-	159		P	5-4-92	P	1904
"	6	23/24	"	4-30-92 JR	117/121	-	149		P	"	P	1914
"	7	29/30	"	5-1-92 TK	124/137	-	159		P	"	P	1920
"	8	33/34AB	"	5-1-92 TK	124/117	-	156		P	"	P	95' before end of seam @ 34A 1917
5-5-92	DS # 9	37/38	1622	5-5-92 JR	141/127	-	173		P	5-7-92	P	8' before end of seam 2004/2001
5-7-92	DS # 10	40/41AB	1533	5-5-92 TK	116/127		179		P	"	P	after 26' of seam 2001
"	11	43/44	1622	5-5-92 JR	132/156		178		P	"	P	7' from end of seam 1903
"	12	45/46	1533	5-6-92 TK	117/117		177		P	"	P	after 216' of seam 1903/1911
"	13	48/49A	"	5-6-92 TK	104/105		154		P	"	P	after 75' of seam 1914/1911
5-12-92	DS # 14	53/54	"	5-11-92 TK	114/124		135		P	5-12-92	P	53' from end of seam 1913
"	15	58/59	1622	5-11-92 JR	109/104		137		P	"	P	after 81' of seam 2002
"	16	63/64	1533	5-11-92 TK	101/123		132		P	"	P	62' from end of seam 1909
"	17	67/69A	"	5-12-92 TK	115/101		144		P	"	P	3' from end of seam 1909/1906

ATTACHMENT 7
GEOMEMBRANE CERTIFICATIONS

NSC**GEOMEMBRANE CERTIFICATION**

Customer: Canonie Environmental

Ship Date: May 7, 1992

Project: Carlstadt, NJ

Number of Rolls Shipped: 2

Order Number: 6006

Nominal Thickness: 60 mil

We hereby certify that the resin and polyethylene geomembrane for the above identified shipment, meets or exceeds National Seal Company's specifications, attached, and NSF Standard 54 specifications for HDPE geomembrane. The tests listed below in the resin specifications have been performed on each batch of resin. The tests listed below in the geomembrane specifications have been performed at least every 50,000 square feet of geomembrane.

RESIN SPECIFICATIONS

Melt Flow Index	1.0 Maximum
Density	0.94 Minimum
Carbon Black Content	2.0 to 3.0

GEOMEMBRANE SPECIFICATIONS

Thickness	60.0 mil Minimum
Stress at Yield	2200 psi Minimum
Stress at Break	3800 psi Minimum
Strain at Yield	13% Minimum
Strain at Break	700% Minimum
Carbon Black Dispersion	A1 or A2

Jane Allen
Jane Allen
Quality Control Manager

5-11-92
Date

100807

nSc

May 11, 1992

GEOMEMBRANE CERTIFICATE OF ANALYSIS

Customer: Canonic Environmental

Number of Rolls Shipped: 2

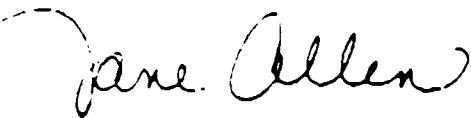
Project: Carlstadt, NJ

Number of Rolls Tested: 2

Order Number: 6006

Nominal Thickness: 60 mil

The geomembrane referenced above was tested for thickness, tensile properties, carbon black dispersion and dimensional stability. The raw polymeric material is first quality polyethylene resin containing no more than two percent clean recycled polymer by weight. Thickness was tested according to ASTM D 751. Tensile properties were tested according to ASTM D 638 using a type IV dumbbell specimen, a strain rate of two inches per minute and grip movement for strain determinations. Carbon black dispersion slides were prepared according to ASTM D 3015 and rated according to the ASTM D 2663 classification chart when viewed under 100X magnification. Dimensional stability was determined according to ASTM D 1204 at 100°C for one hour. Tear resistance was determined according to ASTM D 1004. A summary of the test results is listed on the following pages.

NATIONAL SEAL COMPANY

Jane Allen
Quality Control Manager

NSC

May 11, 1992

GEOMEMBRANE CERTIFICATE OF ANALYSIS

(Page 2)

Roll Number	S6L-122B-2B1108-2 S6L-206A-2C1106-2		
Thickness (mils)		61.8	61.2
Stress at Yield (psi)	MD	2570	2610
	TD	2600	2700
Stress at Break (psi)	MD	4720	4540
	TD	5290	4870
Strain at Yield (percent)	MD	18	18
	TD	17	16
Strain at Break (percent)	MD	840	780
	TD	990	960
Carbon Black Dispersion		A1	A1
Dimensional Stability	MD	-0.4	-0.4
	TD	0.0	0.0
Tear Resistance (ppi)	MD	879	911
	TD	854	892

NSC

May 11, 1992

POLYETHYLENE RESIN CERTIFICATE OF ANALYSIS

Customer: Canonic Environmental

Resin Type: G36-24-149

Project: Carlstadt, NJ

Order Number: 6006

The polyethylene resin referenced above was tested for melt flow index, density and carbon black content. Melt flow index was determined according to ASTM D 1238. Density was determined according to ASTM D 1505. Carbon black content was determined according to ASTM D 1603. The average test results are reported below.

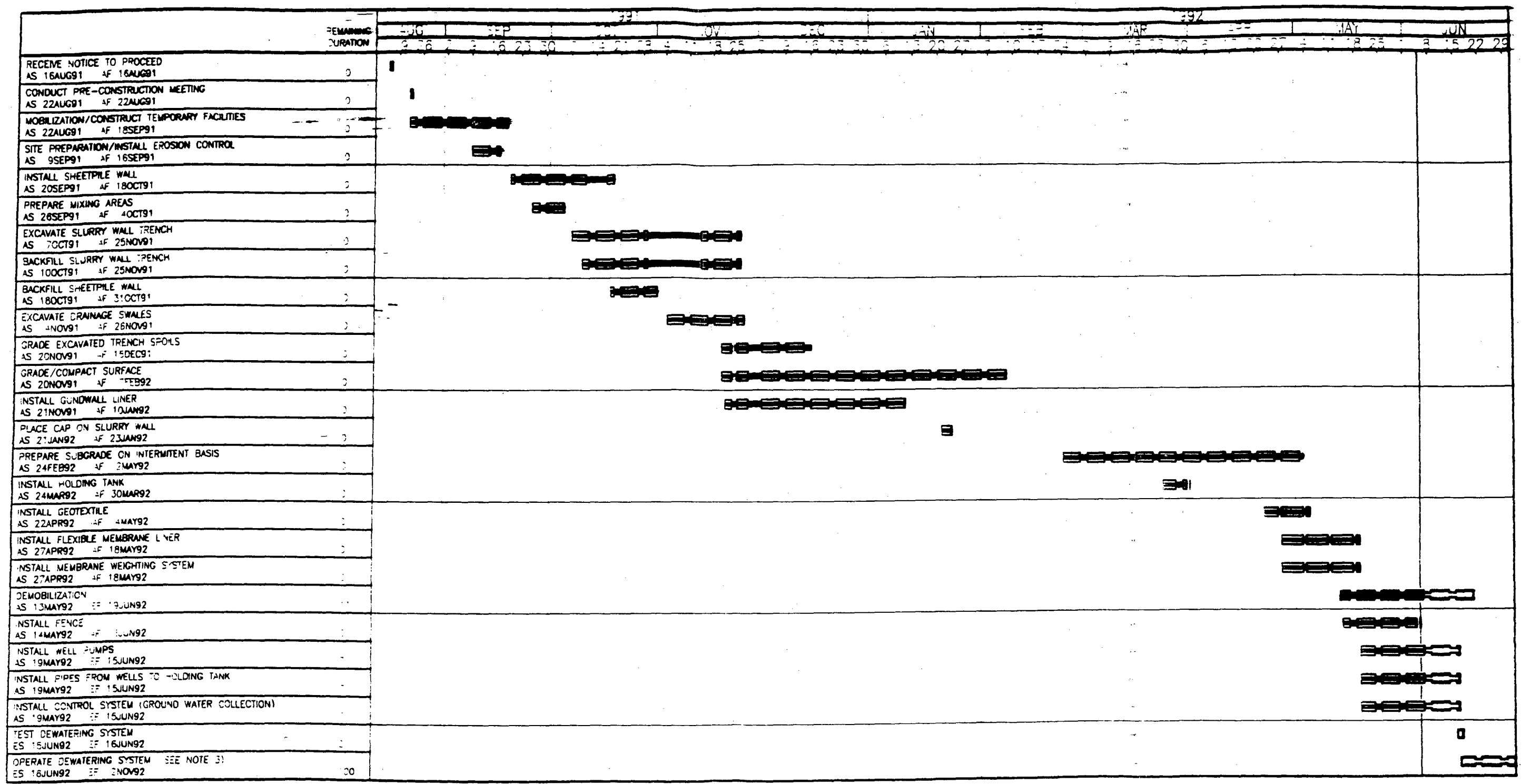
Resin Blend Number	206A	122B
Melt Flow Index (g/10 min)	0.32	0.29
Density (g/cm ³)	0.950	0.949
Carbon Black Content (percent)	2.45	2.40


Jane Allen
Quality Control Manager

FIGURE 1
PROJECT SCHEDULE

REV. 111
9: 52-57

DRAWING
NUMBER 90-198-872



3-6-92	UPDATED 4-6-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WUH	M.K.W.	J.E.M.
3-26-92	REVISED PER EPA UNILATERAL SCHEDULE MILESTONES	J.M.R.	M.K.W.	J.E.M.
6-5-92	UPDATED 6-3-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	WUH	M.K.W.	J.E.M.
5-8-92	UPDATED 5-8-92 FOR ACTUAL WORK PROGRESS AND UPCOMING WORK TASKS	J.M.R.	M.K.W.	J.E.M.
No.	DATE	ISSUE / REVISION	DATE	BY

- LEGEND:
- ACTIVITY BAR
 - CRITICAL ACTIVITY
 - PROGRESS BAR

- NOTES:
- THE SCHEDULE FOR TASKS SHOWN IN 1992 IS BASED ON THE UNILATERALLY REQUIRED SCHEDULE MILESTONES GIVEN IN THE EPA'S MARCH 23, 1992 LETTER.
 - WORK WAS INTERRUPTED BECAUSE OF "OILY FLUID" PROBLEM AND/OR DEFLECTED SHEETPILE PROBLEM.
 - REFER TO THE OPERATION AND MAINTENANCE SCHEDULE FOR ONGOING DEWATERING ACTIVITIES.

MAY PROGRESS SCHEDULE
INTERIM REMEDY
SCP CARLSTADT SUPERFUND SITE
CARLSTADT, NEW JERSEY

PREPARED FOR
COOPERATING PRP GROUP

CanonieEnvironmental

DATE: 2-1-92
SCALE: NONE

FIGURE 1

DRAWING NUMBER
90-198-872

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

August 20, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
JUNE 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between June 1, 1992 and June 30, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey.

2.0 - Work Completed

The following items were completed during the month of June:

- o Deployment and filling of ballast tubes for weighting infiltration barrier;
- o Erection of the perimeter fence;
- o Installation and startup of the dewatering system;
- o Recovery and removal of groundwater from the holding tank was initiated.

All materials and installation methods met or exceeded the requirements in the Technical Specifications and the Quality Assurance Project Plan (QAPP) for each of the completed work items.

CanonieEnvironmental

100813

3.0 - Work Scheduled for July 1992

The following work items are scheduled for July:

- o Correct electrical problems with the dewatering system;
- o Install heat tracing and insulation on dewatering system piping;
- o Install tank heaters and controls;
- o Repair miscellaneous pinholes in infiltration barrier;
- o Remove miscellaneous construction debris still on-site;
- o Continue collection and removal of groundwater.

4.0 - Changes to Project Schedule

No changes to project schedule are planned. On-site work is planned for completion before the end of July, 1992. Removal of ground water will continue other on-site activities have been completed.

5.0 - Other QA/QC Activity

No additional QA/QC activity was performed during the month of June beyond assuring the materials and installation procedures met the requirements found in the Technical Specifications and the QAPP.

SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Jim Semple - Canonie

100814

CanonieEnvironmental

MEMO

To: Joe Mihm

90-198

From: Stephen Pierce

August 20, 1992

MONTHLY QUALITY ASSURANCE/QUALITY CONTROL REPORT
JULY 1992
SCP CARLSTADT SUPERFUND SITE

1.0 Introduction

This report outlines the Quality Assurance Quality Control (QA/QC) activities performed by Canonie Environmental Services Corp. (Canonie) during the period between July 1, 1992 and July 31, 1992 at the SCP Carlstadt Superfund site in Carlstadt, New Jersey.

2.0 - Work Completed

The following items were completed during the month of July:

- o Heat tracing and insulation of the dewatering system piping;
- o Any electrical operational problems with the dewatering system;
- o Installation of holding tank heaters and controls;
- o Repairs to infiltration barrier;
- o Continued collection and removal of ground water.

All materials and installation methods met or exceeded the requirements in the Technical Specifications and the QAPP for each of the completed work items.

CanonieEnvironmental

100815

3.0 - Work Scheduled for August 1992

The following work items are scheduled for the month of August:

- o Installation of the three solenoid drain valves;
- o Removal of any remaining construction debris;
- o Continued recovery and removal of ground water.

4.0 - Changes to Project Schedule

No changes to project schedule are planned. Recovery and off-site removal of ground water will continue as scheduled.

5.0 - Other QA/QC Activity

No additional QA/QC activity was performed during the month of June beyond assuring the materials and installation procedures met the requirements found in the Technical Specifications and the QAPP.

SDP/sp

cc: Mark Seel - Langan
Curt DeWolf - Canonie
Jim Semple - Canonie

APPENDIX C
WELL RECLASSIFICATION

100818

Canonie Environmental

Canonie Environmental Services Corporation
500 North Larch Road, Third Floor
King of Prussia, Pennsylvania 19381
Phone: (215) 337-2550
Fax: (215) 337-2560

December 4, 1991

90-198

Mr. Michael Miller
N.J. Dept. of Environmental
Protection and Energy
Bureau of Water Allocation
Third Floor
CN 029
Trenton, NJ 08625

Request for Permit Numbers
SCP Carlstadt Superfund Site

Dear Mr. Miller:

Canonie Environmental Services Corporation (Canonie) is herein submitting Monitoring Well Permit Applications (form DWR-133M) for seven existing monitoring wells (MW-1S through MW-7S) and seven existing piezometers (P-5, P-6, P-8 through P-11 and P-14). The seven existing monitoring wells are currently permitted but require reclassification as recovery wells since they will be utilized for dewatering purposes. The seven existing piezometers are currently unpermitted and require permit numbers.

The Monitoring Well Permit forms have been prepared by a New Jersey registered well driller, Mr. Roger Logel, of Empire Soils Investigations, Inc. in Edison, New Jersey. Remediation activities are currently being performed and your assistance in providing these permits is appreciated so that field activities can continue.

If you have any questions, please contact either myself at (215) 337-2551 or Steve Pierce at (201) 438-0096.

Sincerely,

Joseph E. Mihm IFSC
Joseph Mihm, P.E.
Project Manager

JM\jdc

Attachments

Serial # 16321

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

4627786
4627787
4627788
4627789
4627790
4627791
4627792
Permit No. 26.13.231
COORD #

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

Owner INmar Associates
Address 1703 E. Second Street
Scotch Plains, NJ 07076
Name of Facility Scientific Chemical Processing
Address Paterson Plank Road
Carlstadt, NJ

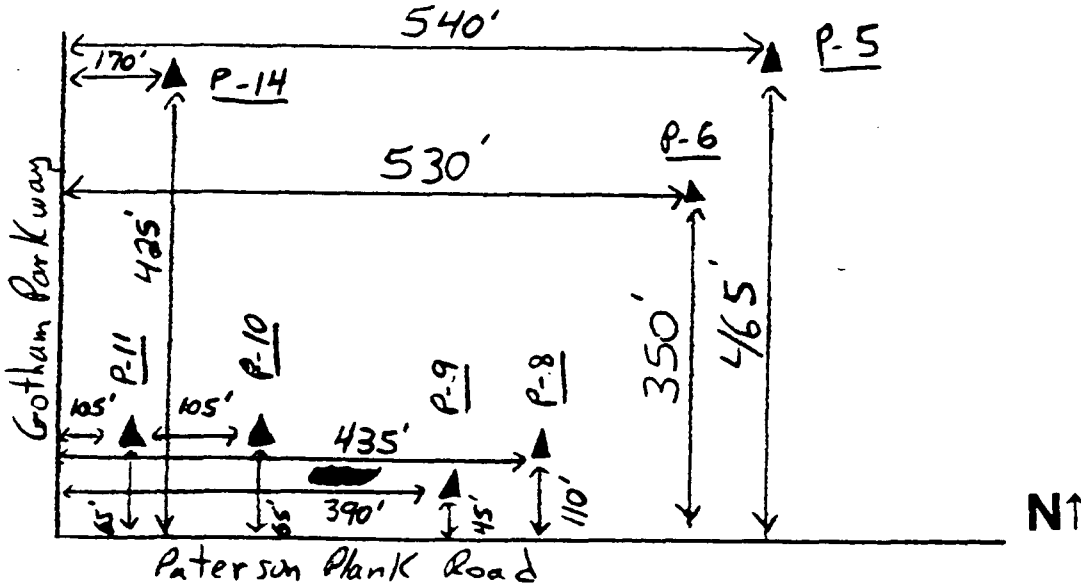
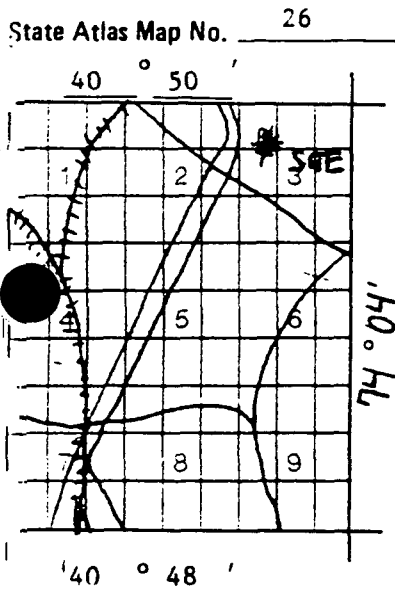
Driller Empire Soils Investigations
Address 35 National Road
Edison, NJ 08817

Diameter of Well(s)	2	Inches	Proposed Depth of Well(s)	15	Feet
# of Wells Applied for (max. 10)	7		Will pumping equipment be installed?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Type of Well (see reverse)	Piezometer		If Yes, give pump capacity	N/A	GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
124	1,2,3,5	Carlstadt	Bergen

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ RCRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPOES Municipal Discharge Permit
- ☐ NJPOES Industrial Discharge Permit
- ☐ Div. Hazardous Waste Mgmt. Enforcement Case
- ☐ Div. Water Resources Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____

Case I.D. Number _____

This Space for Approval Stamp
WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
DEC 6 1991

FOR ☐ Issuance of this permit is subject to the conditions attached. (see next page) ☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐ For monitoring purposes only
USE WELLS ORIGINALLY DRILLED WITHOUT PERMITS.

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.
Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

12/4/91

Signature of Driller [Signature] License # 1101166
Signature of Owner [Signature]
Owner — Blue Driller — White

COPIES: Water Allocation — White and Pink

100820

SERIAL # 23154

WR-133M (4/90)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2627793

-Thru-

2627799

Permit No.

C-3

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.13.205

Owner Inmar Associates
Address 1703 E. Second Street
Scotch Plains, NJ 07076
Name of Facility Scientific Chemical Processing
Address Paterson Plank Road
Carlstadt, NJ

Driller Empire Soils Investigations
Address 35 National Road
Edison, NJ 08817

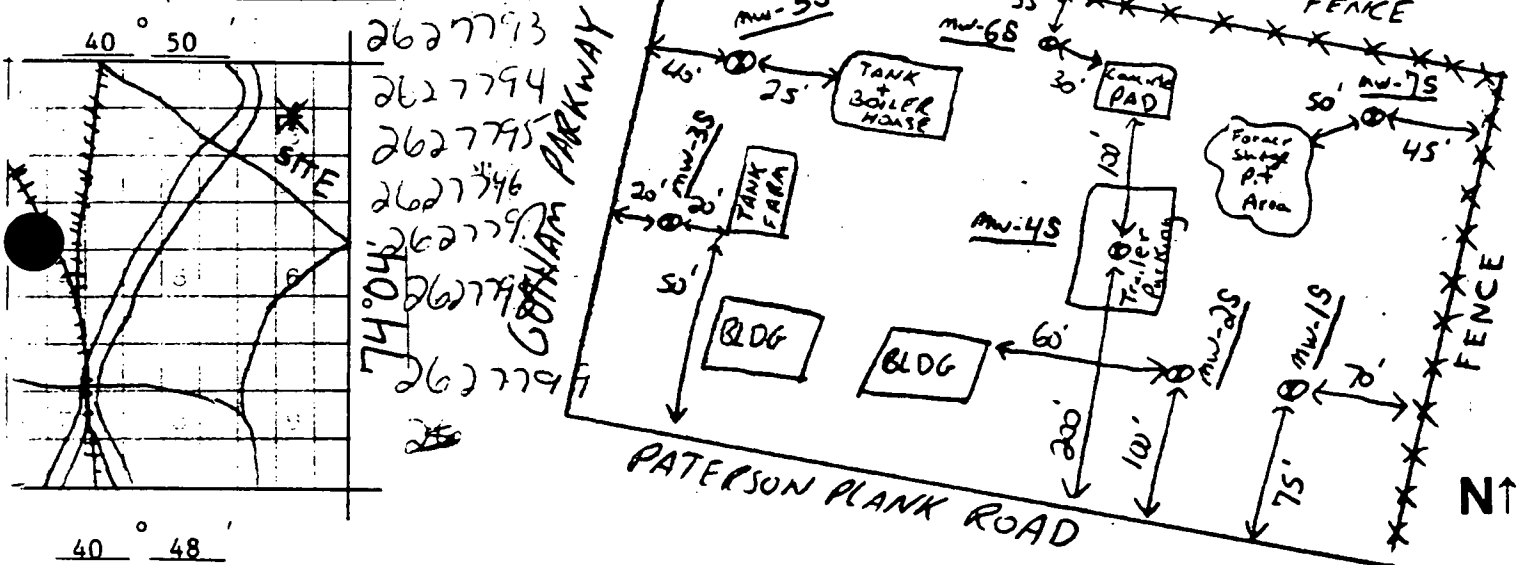
Diameter of Well(s)	4	Inches	Proposed Depth of Well(s)	25	Feet
# of Wells Applied for (max. 10)	7		Will pumping equipment be installed? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		
Type of Well (see reverse)	Recovery		If Yes, give pump capacity	5	GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
124	1,2,3,5	Carlstadt	Bergen

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.

State Atlas Map No. 26



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Bill Fund Case
- ☐ CRA Case
- ☐ CERCLA (Superfund) Site
- ☐ CRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ v. Hazardous Waste Mgmt. Enforcement Case
- ☐ v. Water Resources Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____

Case I.D. Number

MW1S - 26-10821 MW5S - 26-10827
MW2S - 26-10824 MW6S - 26-10830
MW3S - 26-10826 MW7S - 26-10822
MW4S - 26-10829

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation

DEC 1991

FOR ☐ Issuance of this permit is subject to the conditions attached. (see next page) ☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
USE ☐ For monitoring purposes only
☒ WELLS ORIGINALLY CONSTRUCTED AS MONITORING WELLS UNDER THE ABOVE REFERENCED PERMIT NUMBERS.

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.
compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

12/4/91

Signature of Driller

Signature of Owner

COPIES: Water Allocation — White and Pink

Health Dept. — Yellow

Owner — Blue

Driller — White

100821

EMPIRE
SOILS INVESTIGATIONS INC.

35 NATIONAL ROAD • EDISON, NJ 08817 • 908/287-2224 FAX 908/287-2069

December 16, 1991

RECEIVED DEC 17 1991

Canonie Environmental
216 Paterson Plank Road
Carlstadt, New Jersey 07072

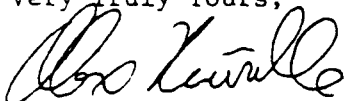
Attention: Steve Pierce

Dear Steve:

Enclosed please find the well permit forms for the previously drilled wells at the SCP site in Carlstadt. The well record forms are being filled out and will be sent in to the State of New Jersey when completed. Copies of the well record forms will also be sent to you.

If you have any further questions or requests, please feel free to call our office at (908) 287-2224.

Very Truly Yours,



Alex Kiwalle
Project Coordinator

New Jersey Department of Environmental Protection and Energy
Water Technical Programs - Bureau of Water Allocation

WELL ABANDONMENT REPORT

MAIL TO:

WELL PERMIT # Unknown
of well sealedBureau of Water Allocation
CN 029
Trenton, NJ 08625-0029DATE WELL SEALED 1/28/92PROPERTY OWNER Langan Environmental Services, Agent for PRP GroupADDRESS River Drive Center 2, Elmwood Park, NJWELL LOCATION 216 Paterson Plank Rd., Carlstadt, NJ Bergen Co.
Street & No., Township, County

MW-1S L-1-5 BL 124 74°-06 40°-50'

Well No., Lot & Block No., Longitude & Latitude (N.J. Grid # may be substituted for longitude & latitude)

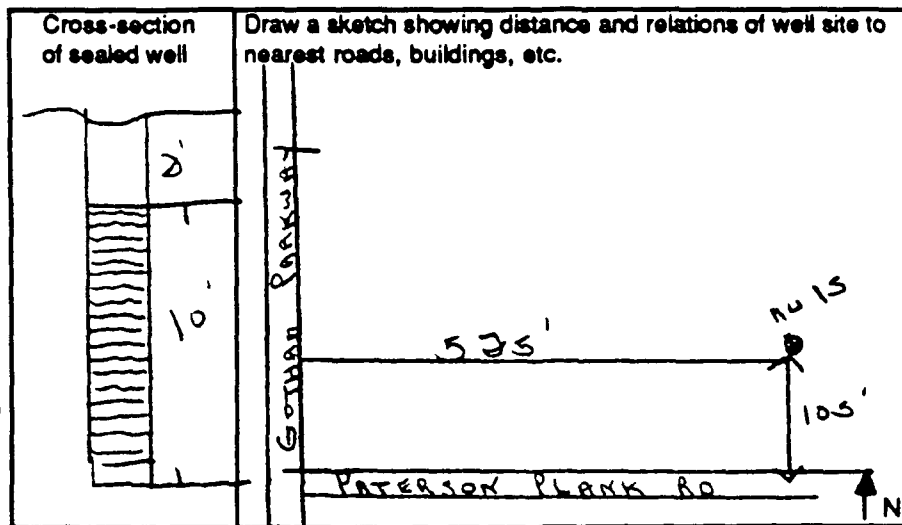
TYPE OF WELL ABANDONED: MonitoringREASON FOR ABANDONMENT: DamagedWAS A NEW WELL DRILLED? ☒ YES☐ NOPERMIT # OF NEW WELL: 26-28255

TOTAL DEPTH OF WELL	<u>12</u>
DIAMETER	<u>4"</u>
CASING LENGTH	<u>2'</u>
SCREEN LENGTH	<u>10'</u>
NUMBER OF CASINGS	<u>1</u>

MATERIAL USED TO SEAL WELL:

<u>8</u>	Gallons of Water
<u>94</u>	Lbs. of Cement
<u>8</u>	Lbs. of Bentonite
<u>—</u>	Lbs. of Sand/Gravel

(none if well is contaminated)

FORMATION: Consolidated
☒ Unconsolidated

To permit adequate grouting, the casing should remain in place, but ungrouted liner pipes or any other obstructions must be removed. Pressure grouting is the only accepted method.

WAS CASING LEFT IN PLACE? ☒ YES ☐ NO CASING MATERIAL: Stainless SteelWERE OTHER OBSTRUCTIONS REMOVED? ☐ YES ☒ NO WHAT WERE THE OBSTRUCTIONS: NONE

I certify that this well was sealed in accordance with N.J.A.C. 7:9-9.1 et seq.

Earl Hauge BDI 328 Stafford Forge Rd., West Creek, NJ
Name of Person Doing Sealing Work Address
(Print or Type)

Signature of Person Doing Sealing Work

5/28/92
Mailing Date
1130
License #

COPIES: White - Water Allocation

Yellow - Owner

Pink - Health Dept.

Goldenrod - Driller

100823

New Jersey Department of Environmental Protection and Planning
Water Technical Programs - Bureau of Water Allocation

WELL ABANDONMENT REPORT

MAIL TO:

WELL PERMIT # Unknown
of well sealed

Bureau of Water Allocation
CN 029
Trenton, NJ 08625-0029

DATE WELL SEALED 1/28/92PROPERTY OWNER Langan Environmental Services, Agent for PRP GroupADDRESS River Drive Center 2, Elmwood Park, NJWELL LOCATION 216 Parerson Plank Rd., Carlstadt, NJ Bergen Co.
Street & No., Township, CountyNW-6S L-1-5, BL 124 74°-06 40°-50'

Well No., Lot & Block No., Longitude & Latitude (N.J. Grid # may be substituted for longitude & latitude).

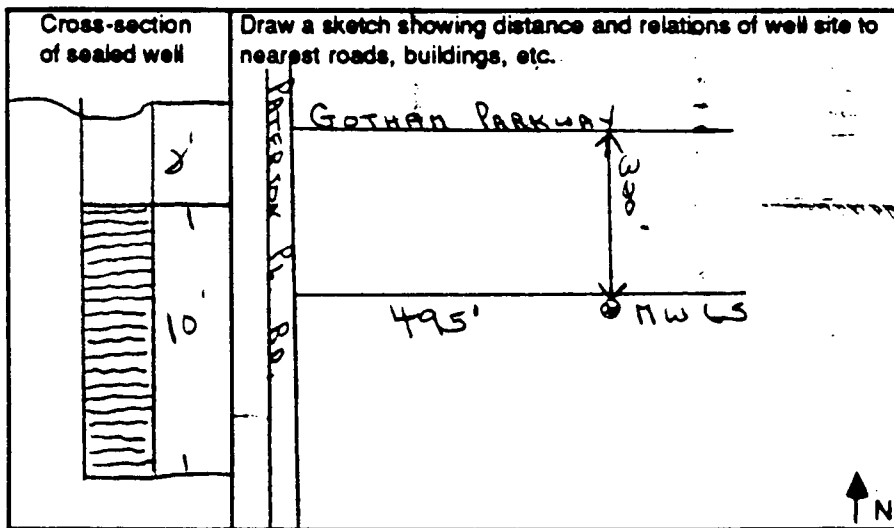
TYPE OF WELL ABANDONED: MonitoringREASON FOR ABANDONMENT: DamagedWAS A NEW WELL DRILLED? ☒ YES☐ NOPERMIT # OF NEW WELL: 26-28256

TOTAL DEPTH OF WELL 12'
DIAMETER 4"
CASING LENGTH 2'
SCREEN LENGTH 10'
NUMBER OF CASINGS 1

MATERIAL USED TO SEAL WELL:

8 Gallons of Water
24 Lbs. of Cement
5 Lbs. of Bentonite
— Lbs. of Sand/Gravel
(none if well is contaminated)

FORMATION: Consolidated
☒ Unconsolidated



To permit adequate grouting, the casing should remain in place, but ungrouted liner pipes or any other obstructions must be removed. Pressure grouting is the only accepted method.

WAS CASING LEFT IN PLACE? ☒ YES ☐ NO CASING MATERIAL: Stainless SteelWERE OTHER OBSTRUCTIONS REMOVED? ☐ YES ☒ NO WHAT WERE THE OBSTRUCTIONS: NONE

I certify that this well was sealed in accordance with N.J.A.C. 7:9-9.1 et seq.

Earl Hauge EDI 328 Stafford Forge Rd., West Creek, NJ 08092

Name of Person Doing Sealing Work
(Print or Type)

Address

Earl Hauge
Signature of Person Doing Sealing Work

5/28/92

Mailing Date

1130
License #

COPIES: White - Water Allocation

Yellow - Owner

Pink - Health Dept.

Goldenrod - Driller

100823A

New Jersey Department of Environmental Protection and Energy
Water Technical Programs—Bureau of Water Allocation

WELL ABANDONMENT REPORT

MAIL TO:

WELL PERMIT # Unknown
of well sealed

Bureau of Water Allocation
CN 029
Trenton, NJ 08625-0029

DATE WELL SEALED 1/28/92PROPERTY OWNER Langan Environmental Services, Agent for PRP GroupADDRESS River Drive Center 2, Elmwood Park, NJWELL LOCATION 216 Paterson Plank Rd., Carlstadt, NJ Bergen Co.
Street & No., Township, CountyP-9 L-1-5 BL 124 74°-06' 40°-50'

Well No., Lot & Block No., Longitude & Latitude. (N.J. Grid # may be substituted for longitude & latitude)

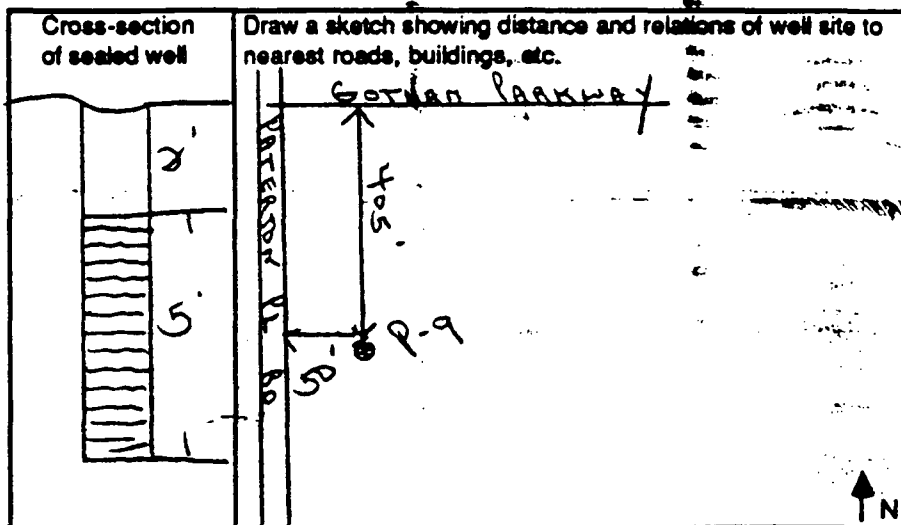
TYPE OF WELL ABANDONED: PiezometerREASON FOR ABANDONMENT: damagedWAS A NEW WELL DRILLED? ☒ YES☐ NOPERMIT # OF NEW WELL: 26-28301

TOTAL DEPTH OF WELL 7
DIAMETER 2"
CASING LENGTH 2'
SCREEN LENGTH 5'
NUMBER OF CASINGS 1

MATERIAL USED TO SEAL WELL:

8 Gallons of Water
94 Lbs. of Cement
5 Lbs. of Bentonite
- Lbs. of Sand/Gravel
(none if well is contaminated)

FORMATION: Consolidated
☒ Unconsolidated



To permit adequate grouting, the casing should remain in place, but ungrouted liner pipes or any other obstructions must be removed. Pressure grouting is the only accepted method.

WAS CASING LEFT IN PLACE? ☒ YES ☐ NO CASING MATERIAL: PVCWERE OTHER OBSTRUCTIONS REMOVED? ☐ YES ☒ NO WHAT WERE THE OBSTRUCTIONS: NONE

I certify that this well was sealed in accordance with N.J.A.C. 7:9-9.1 et seq.

Earl Hauge BDI 328 Stafford Forge Rd., West Creek, NJ 08082

Name of Person Doing Sealing Work
(Print or Type)

Address

Earl Hauge
Signature of Person Doing Sealing Work

5/28/92

Mailing Date

1130

License #

COPIES: White - Water Allocation

Yellow - Owner

Pink - Health Dept

Goldenrod - Driller

100824

APPENDIX D
WEEKLY PROGRESS MINUTES

100826

FINAL PRE-CONSTRUCTION MEETING MINUTES
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE

1.0__Attendees

- o See Attachment #1.

2.0__Introductions

- o Introduction of Langan Environmental Services, Inc. (LESI) project participants by LESI President, Don Murphy;
- o Introduction of agency representatives;
- o Introduction of Canonie Environmental Services Corp. (Canonie) project participants by Canonie Project Manager, Joseph E. Mihm.

3.0__Project Overview

- o Joseph E. Mihm and Canonie's Regional Construction Manager, Jim Semple, provided the project overview;
- o Cliff Cordova is Canonie's Construction Superintendent and will be in charge of all field activities;
- o All communications between the agencies and Canonie will be through LESI;
- o The following list of activities will be performed for this project:
 1. Mobilization;
 2. Site preparation;

100827

CanonieEnvironmental

2

FINAL PRE-CONSTRUCTION MEETING MINUTES
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

3. Silt fence installation;
 4. Construction of sheetpile wall along Peach Island Creek;
 5. Construction of the slurry wall;
 6. Installation of Gundwall;
 7. Capping of the slurry wall;
 8. Construction of the infiltration barrier;
 9. Installation of the dewatering system;
 10. Transport of extracted groundwater to treatment facility.
- o IRRDR provides a detailed description of all phases of work;
 - o The two-week look-ahead schedule includes the following activities:
 1. Clearing the Support Zone;
 2. Installation of fencing;
 3. Trailer set-up;
 4. Installation of utilities and telephones;
 5. Construction of the Decon Zone;
 6. Construction of the Staging Area;
 7. Installation of silt fence;
 8. Construction of the sheetpile wall.
 - o The trailer layout was enclosed with the Pre-Construction Meeting Agenda.

FINAL PRE-CONSTRUCTION MEETING MINUTES
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

4.0 Health and Safety Overview

- o Canonie's Regional Health and Safety Coordinator, Clayton Bock, provided the health and safety overview;
- o All persons working in the Exclusion Zone will be required to read the Health and Safety Plan and sign an acknowledgement form afterwards;
- o The Health and Safety Plan will be strictly enforced;
- o The SSO, Rachelle Polley, has the authority to close down the project whenever conditions warrant;
- o A GC will be provided at the site as soon as trailers arrive;
- o Other health and safety equipment, such as OVAs, CGIs, Mini-Rams and HNus, will also be provided at the site;
- o All health and safety data generated is accessible to workers;
- o A start-up meeting will be held to review health and safety matters prior to initiation of intrusive site activities;
- o Daily tail-gate meetings will be held each morning during which time health and safety matters will be addressed;

FINAL PRE-CONSTRUCTION MEETING MINUTES
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

- o Any person working at the site must submit to Canonie certifications indicating receipt of proper health and safety training and medical surveillance.

5.0__Schedule_Overview

- o The schedule overview was provided by Joseph E. Mihm;
- o The project schedule has an 18-week duration;
- o Weekly progress meetings will also be held at the site.

6.0__Questions_and_Answers

Q: Are any union problems anticipated?

A: No. Canonie's subcontractor, Hi-Tech Remediation Ltd. has met with the local BAs and will be providing a union labor force.

Q: Will any more fence be removed other than that in the area of the existing buildings along Patterson Plank Road?

A: Not at this time. However, all site fencing will be repaired with new fencing near the end of the project.

Q: Will a DEP representative be at the site?

A: Probably during work being performed along Peach Island Creek and involving the wells.

FINAL PRE-CONSTRUCTION MEETING MINUTES
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

Q: When will progress meetings be held?

A: Tuesdays at 10:00 A.M.

cc: Meeting Attendees per Attachment #1

ATTACHMENT #1

PRE-CONSTRUCTION MEETING ATTENDANCE LIST
AUGUST 22, 1991
SCP CARLSTADT SUPERFUND SITE

<u>Name</u>	<u>Representing</u>
Peter Porter	Canonie
Curt DeWolf	Canonie
Frank Gontowski	Canonie
Rachelle Pollev	Canonie
Clayton Bock	Canonie
Jim Semple	Canonie
Cliff Cordova	Canonie
Joseph E. Mihm	Canonie
Jack Parmater	Hi-Tech Remediation Ltd.
Greg Hatt	Hi-Tech Remediation Ltd.
Don Murphy	LESI
Gerry Coscia	LESI
Mark Seel	LESI
Pat Evangelista	USEPA
Jerry Maresca	ICF Kaiser
Doug Henne	ICF Kaiser
Steve McGregor	NJDEPE
Pam Lange	NJDEPE

100832

WEEKLY PROGRESS MEETING MINUTES
AUGUST 27, 1991
SCP CARLSTADT SUPERFUND SITE

1.0__Review_and_Approval_of_Meeting_Minutes

- o Pre-Construction Meeting minutes were distributed to the attendees (list of attendees attached);
- o Minor changes were made in accordance with comments from attendees and placed in the Final Pre-Construction Meeting minutes.

2.0__Schedule_and_Progress_Review

- o Work scheduled for this week consists of tasks required to complete set-up of the support zone;
- o Site security is in place;
- o Canonie H&S equipment is on-site;
- o Decon and other remaining trailers are due at site today;
- o Snow fence will continue to be placed as needed;
- o Panel fencing will be placed at front of trailers;
- o Panel fence placement will depend on trailer delivery schedule;
- o Utilities and phones continue to be installed;
- o Canonie will circulate a telephone list for all the trailers once all phones are connected;

100833

WEEKLY PROGRESS MEETING MINUTES
AUGUST 27, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

- o Personnel decon area will be constructed approximately Friday;
- o Staging area/decon pad should be constructed by the end of next week;
- o Canonie will not be at site Monday (Labor Day);
- o Surveyors will be on-site approximately Tuesday;
- o Canonie has contacted utility companies to determine what type of line was encountered outside the storage building;
- o Support zone set-up is going smoothly and according to schedule.

3.0 Health and Safety

- o H&S topics were discussed in order to assess our status for beginning intrusive activities;
- o H&S certifications for all present site personnel are either in or forthcoming shortly;
- o Canonie H&S equipment is at site;
- o Canonie will be performing an equipment inventory to double check;
- o The level B air system will be a cascade-type for ground crews;

WEEKLY PROGRESS MEETING MINUTES
AUGUST 27, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

- o Machines will have individual air cylinders for operators in level B;
- o Site specific H&S training will be next week;
- o 1 or 2 operators are expected to be used next week;
- o MSA will be sending a representative to train key people in equipment use and maintenance;
- o All H&S activities are on schedule or coming along satisfactorily;

4.0 QA/QC

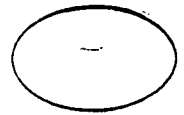
- o No involved QA/QC activities have been required yet;
- o The majority of the QA/QC equipment is presently on-site;
- o Will try to set-up equipment in storage building by end of next week;
- o Greg-Hatt of Hi-Tech is presently gathering submittals required for materials to be used next week;
- o QA/QC activities are progressing smoothly.

WEEKLY PROGRESS MEETING MINUTES
AUGUST 27, 1991
SCP CARLSTADT SUPERFUND SITE
(Continued)

5.0 Miscellaneous

- o Canonie has not yet secured use of the parking lot across the street;
- o The owner leases space in Gotham Park and feels that this project is counterproductive to his business interests, but may still allow us to use the lot;
- o Canonie will contact the owner in approximately two weeks to discuss this matter again.

cc: Meeting Attendees per Attachment #1
Dr. Don Murphy - Langan
Joe Mihm - Canonie



1/4" X 1/4"

H1-TECH

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 3, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Meeting minutes from August 27, 1991 were distributed to the attendees (see Attachment #1); no revisions were requested and were approved.

2.0 Schedule and Progress Review

- o The following work was completed during the previous week:
 1. Receipt of all support zone trailers.
 2. Blocking and leveling of trailers in support zone.
 3. Plumbing for support zone trailers.
 4. Phone service installation to all trailers except decon trailer.
 5. Revisions to the staging area layout.
 6. Inspection of utility line encountered just northeast of storage building by N.J. Bell, AT&T, PSE&G, Transcontinental Pipe and Hackensack Water; none of these companies claimed ownership; precautionary measures will be taken when trenching in this area.
- o Ongoing tasks included the installation of electric service to trailers; progress being limited by availability of PSE&G personnel required to inspect different phases of work; work expected to be completed week of 9/2/91.
- o Work scheduled for the coming week includes:
 1. Set-up of personnel decon area.
 2. Loader, dozer and backhoe to be delivered.
 3. Installation of silt fencing.
 4. Layout survey of slurry wall and sheetpile corners and revised staging area.

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 3, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. Construction of staging area.

3.0 Health and Safety

- o Canonie personnel performed utility trenching in level C where VOC levels exceeded background;
- o SSO office in decon trailer; no smoking allowed in decon trailer due to presence of gas cylinders;
- o Personnel decon area will be set-up this week;
- o Laborers and/or operators required for work this week will receive physicals this week and will be immediately provided certifications needed to begin work on-site
- o MSA will provide an on-site equipment training session for our personnel; Mark Seel is invited.

4.0 QA/QC

- o No QA/QC activities undertaken during previous week.

5.0 Miscellaneous and Old Business

- o EPA and LESI will develop a method for Canonie to follow when submitting any proposed revisions or addendums to the project drawings or specifications;
- o Canonie contacted the owner of parking lot behind the bank for permission to use as needed; owner is still considering our request; Canonie will contact owner again the week of 9/2/91.

cc: Meeting Attendees per Attachment #1
Pam Lange - NJDEPE

100839

Canonie

FINAL WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 10, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Meeting minutes from September 3, 1991 were distributed to the attendees (see Attachment #1); no revisions were requested and were approved.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Surveyor laid out staging area, sheetpile wall and slurry wall alignment on Tuesday September 3, 1991.
 2. Completed installation of signs and started personnel decon area on Wednesday September 4, 1991; also worked with security guard to tighten sign-in procedures.
 3. Completed personnel decon area construction on Thursday September 5, 1991.
 4. Loader and dozer received and fabrication of air bottle racks started Friday September 6, 1991.
 5. Silt fence installation started on Monday September 9, 1991.
- o Ongoing tasks included the installation of electric service to trailers; progress being limited by availability of PSE&G personnel required to inspect different phases of work; work expected to be completed week of 9/16/91.
- o Work scheduled for the coming week includes:
 1. Silt fence installation.
 2. Placing stone in support area.
 3. Complete grading at south end of support zone.
 4. Staging area construction will be started.

FINAL WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 10, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. Stake wells, piezometers and miscellaneous pipes.
- o During discussion of work scheduled for upcoming week, Canonie also proposed grouting piezometers P-1, P-7, and P-9, and miscellaneous pipes to be abandoned as shown on the drawings on Wednesday September 11, 1991; it was decided to cut and cap the miscellaneous pipes and have Cliff Cordova of Canonie and Mark Seel of Langan perform a site walk to determine the minimum number of piezometers which will require grouting; this was being performed so that EPA would be able to minimize the number of piezometers to be removed or grouted; Pat Evangelista of the EPA and Steve MacGregor of NJDEP agreed to find well permit numbers for piezometers so these could be used for abandonment paperwork; later discussions were held the afternoon of Tuesday September 10, 1991 between Pat Evangelista, Gerry Coscia of Langan and the Canonie, Langan and EPA field staffs to decide which piezometers would be abandoned; the IRRDR listed piezometers P-10, P-11, P-12 and P-13 to be physically removed during trenching and piezometers P-1, P-7 and P-9 to be grouted; the final resolution of the afternoon discussions were to grout piezometers P-1, P-7, P-12 and P-13 and remove them during trenching if they are exposed or disturbed.

3.0 Health and Safety

- o Radios are on-site and working;
- o All health and safety equipment required for all workers is on-site;
- o Silt fence installation has been performed in level C to date;
- o Canonie now has added a health and safety technician to the field staff to assist the SSO;

FINAL WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 10, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-193
(Continued)

4.0 QA/QC

- o The submittals required for materials to be used for the silt fence and staging area have been obtained and are on file.

5.0 Miscellaneous and Old Business

- o Since no utility companies are taking responsibility for the pipeline encountered just northeast of the storage building; Hi-Tech will perform the slurry wall trenching in this area very carefully; a plan of action will be devised if this pipeline is encountered.
- o Permission was given by Wilson Associates to use their parking lot across the street for a limited number of cars (approximately four to five); if we require more spots, we can call for permission.
- o Off-site air monitoring will be performed if on-site conditions warrant it.
- o VOC emissions will be controlled with one or a combination of the following:
 1. Plastic sheeting;
 2. Water;
 3. Soil cover;
 4. Foam.

cc: Meeting Attendees per Attachment #1
Pam Lange - NJDEPE

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Meeting minutes from September 3, 1991 were distributed to the attendees (see Attachment #1); minor revisions were requested and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Silt fence trenching and staking of wells was performed on Monday September 9, 1991.
 2. Snow fencing was relocated as needed to mark-off exclusion zone and silt fence trenching was continued on Tuesday September 10, 1991.
 3. Started placing silt fence, started demolition of elevated foundation and grouted piezometers P-1, 7, 12 and 13 on Wednesday September 11, 1991.
 4. Cleared parking area along south end of Paterson Plank Road, backfilled silt fence trench and cleared staging area on Thursday September 12, 1991.
 5. Excessive dust being generated by site activities, therefore site work was halted on Friday September 13, 1991.
- o Ongoing tasks included the start-up of electric service to trailers; progress being limited by PSE&G; all payments and inspections completed; service expected week of 9/16/91.
- o Work scheduled for the coming week includes:
 1. Complete staging area and decon pad.
 2. Finish placing stone in support area.
 3. Clear banks along Peach Island Creek for sheetpiling.

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4. Receive sheetpiling and equipment.
 5. Start sheetpile wall construction.
- o During discussion of work scheduled for upcoming week, Canonie proposed clearing the bank of Peach Island Creek prior to clearing the remainder of the site to aid with dust control; the opposite clearing sequence is stated in the IRSDR; Canonie proposed to perform the remainder of the site clearing during site grading; all parties present felt this was a more satisfactory clearing sequence and agreed to allow this plan to be implemented.

3.0 Health and Safety

- o All silt fence trenching and foundation demolition was monitored with no excessive VOC emissions encountered; all trenching and demolition was performed in level C;
- o Silt fence installation was performed in level D;
- o VOC emissions of 12ppm above background encountered during decon pad construction; bag samples collected and analyzed; no vinyl chloride present in bag samples.

4.0 QA/QC

- o The submittals Canonie has on file were inspected by Mark Seel of Langan and Jerry Maresca of ICF Kaiser (EPA) and found to be satisfactory;
- o Canonie personnel have been present during field activities to ensure that construction is being performed in accordance with the project drawings and specifications.

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o After-the-fact permits may be required for the unpermitted wells and piezometers; these include piezometers P-7, 12 and 13, which were grouted on Wednesday September 11, 1991.
- o Sheetpile wall construction will go into next week.
- o Installation of groundwater extraction system will be performed following slurry wall construction.

cc: Meeting Attendees per Attachment #1
Joseph E. Mihm

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Meeting minutes from September 17, 1991 and final meeting minutes from September 10, 1991 were distributed to the attendees (see Attachment #1); no revisions were requested and are accepted.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Staging area construction was initiated, concrete debris from foundation demolition was stockpiled, hay bales were placed where silt fence erection was not possible, received water truck and stone for sections of the staging area was placed on Monday September 16, 1991.
 2. Main construction entranceway was prepared and staging area construction was continued on Tuesday September 17, 1991.
 3. Staging area construction was completed, sheetpiling was delivered, splash guard around decon pad was erected and creek bank clearing was initiated at the south end on Wednesday September 18, 1991.
 4. Performed repairs on CAT 225, set-up bottled air and 12-packs for level B and erected crane on Thursday September 19, 1991.
 5. Resumed creek bank clearing, set-up bottled air on loader and constructed sheetpile template on Friday September 20, 1991.

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Work scheduled for the coming week includes:
 - 1. Continue creek bank clearing.
 - 2. Continue with sheetpile installation.
 - 3. Continue with concrete demolition.
- o Question was raised about status of schedule; project remains approximately one week behind schedule; no additional slippage has been incurred.

3.0 Health and Safety

- o Clearing work along creek bank being performed in level C; air monitoring levels at 1 to 2ppm above background; no vinyl chloride encountered;
- o Sheetpiling construction started in level C and downgraded after the first day;
- o The sludge pile at southeast corner was disturbed; air monitoring levels at 1 to 20ppm above background; work was stopped and all personnel left site; vinyl chloride detected in bag sample at less than 1ppm;
- o All workers on-site have received at least 2 hours of on-site training;
- o Level B equipment is ready.

4.0 QA/QC

- o Submittals for sheetpiling are on-file in the Canonic trailer;
- o Sheetpile alignment and plumbness is being inspected;
- o Some debris being encountered during driving; most sheets are driving without excessive trouble;

WEEKLY PROGRESS MEETING MINUTES
SEPTEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Additional debris removal may be required where sheets are not driving.

5.0 Miscellaneous and Old Business

- o Moving the slurry pond from the location indicated on the drawings to an area adjacent to the northeast corner of the staging area was proposed; Pat Evangelista requested that the proposal be submitted in writing to EPA so Ray Basso can approve; all future proposed modifications must be handled in this manner;
- o Complaints by Wilson Associates, owners of the industrial park behind the site, were presented; Wilson Associates feels that the signs along Gotham Parkway are causing them to lose business; Pat Evangelista will call Robert Wilson and discuss the situation;
- o Canonie has VOC emissions control equipment on-site such as plastic sheeting and foam machine; Canonie has utilized this particular foam machine on other sites;
- o Oil boom and sorbent pads are also at the site for work along Peach Island Creek; Pat Evangelista mentioned that creek sediments should not be stirred-up and that work in this area should be performed with care;
- o Pam Lange will be in contact with Pat Evangelista concerning how to handle the well permits.

cc: Meeting Attendees per Attachment #1

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 1, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from September 24, 1991 progress meeting were distributed to the attendees; one minor revision was requested; final version will be distributed at October 8, 1991 meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. "Super bags" of bentonite have been delivered to site and are currently being stored on the backfill mixing area.
 2. Approximately 133 lineal feet of sheetpile has been driven; not all piles have been driven to final tip elevation; some resistance being encountered from hard layers which are present; may obtain a larger hammer.
 3. Slurry pond has been completed.
 4. Slurry recirculation pump has been plumbed and slurry line is in place.
 5. Overpacked the drum encountered during the pre-excavation for sheetpile wall; store overpack drum next to T-5 roll-off.
 6. Initiated construction of slurry mixing area.
- o Work scheduled for this week includes:
 1. Slurry mixing.
 2. Slurry wall construction on Friday October 4, 1991.
 3. Continuing sheetpile wall.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 1, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Schedule remains approximately one week behind; Canonie will begin overlapping sheetpile wall and slurry wall construction in order expedite schedule; revised schedule will be available this week.

3.0 Health and Safety

- o Sheetpile work has generally been performed in level D; this situation helps avoid injuries due to overhead hazards;
- o Sheetpile driving has been monitored continuously;
- o VOC readings at slurry pond excavation were at 5-20 ppm above background; vinyl chloride was encountered at 67 ppb above background; all work in slurry pond performed in level B;
- o Sheetpile wall pre-excavation work required upgrading to level B at approximately station 15+70; vinyl chloride encountered at 142 ppb; soil cover was placed over exposed areas to control emissions;
- o Offsite monitoring has been performed; miscellaneous spikes of 2 ppm above background encountered; these readings may have been caused by methane being detected by the OVA; owners haven't expressed any concern about monitoring on their property.

4.0 QA/QC

- o Sheetpile elevations are being checked;
- o Plumbness of sheetpiling is generally within specification;
- o Alignment of sheetpiling is within specification;

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 1, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Gradation testing for Liza common fill is in progress;
- o Plumbness of driven piles is generally within specification; miscellaneous sheets are encountering refusal at approximately 4 to 6 feet below grade; no more than 2 adjacent sheets are encountering refusal; Canonie is evaluating the effects of this scenario on the stability of the sheetpile wall.

5.0 Miscellaneous and Old Business

- o EPA has contacted Wilson Associates about our being asked not to use parking lot across from site; EPA does not want to decrease frequency or wording of signs along Gotham Parkway; EPA may conduct a meeting with Wilson Associates; Canonie stated that they may be willing to clear area outside fence along Gotham Parkway for landscaping since Wilson Associates has expressed interest in having this work performed; Canonie would perform clearing at end of project.
- o EPA requested that temporary fence be erected at the northeast corner of the site between the end of the perimeter fence and the railing of the culvert crossing Peach Island Creek.
- o Van Bares will be on-site to replace Cliff Cordova.

cc: Meeting Attendees per Attachment #1
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 8, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from October 1, 1991, progress meeting were distributed to the attendees; revisions requested will be incorporated; final version will be distributed at October 15, 1991 meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued sheetpile wall construction and probing for debris along creek, started laying hose to slurry pond and constructing backfill mixing area on Monday September 30, 1991.
 2. Continued sheetpile wall construction and constructing backfill mixing area, started excavating sheetpile return line for sheetpile wall at southeast corner of site and received and mixed a bulk load of bentonite on Tuesday October 1, 1991.
 3. Received and mixed two bulk loads of bentonite, started extending the staging area to the backfill mixing area, continued probing for debris along creek on Wednesday October 2, 1991.
 4. Continued probing for debris along creek and uncovered a 6 inch PVC line emitting a sewage odor running perpendicular to creek bank at northeast corner of the site on Thursday October 3, 1991.
 5. Bergen County Sewer arrived at site and verified that the 6 inch PVC pipe was not theirs, continued probing for debris along creek, sheetpile wall construction and laying hose to slurry pond on Friday October 4, 1991.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 8, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Continued sheetpile wall construction, probing for debris along creek, started hanging plastic splash guard along Carolina Freight fence and erecting temporary fencing around the staging area on Saturday October 5, 1991.
 7. Continued sheetpile wall construction, completed preparatory work for slurry wall and started slurry trench excavation on Monday October 7, 1991.
- o Work scheduled for this week includes:
 1. Completing the sheetpile wall;
 2. Continuing the slurry trench excavation;
 3. Starting backfill of slurry trench;
 4. Starting backfill behind sheetpile wall.
 - o Schedule remains approximately one week behind; an updated progress schedule was issued to Don Murphy of Langan Environmental Services, Inc. (Langan) on Friday, October 4, 1991, with Canonie's monthly progress report.

3.0 Health and Safety

- o Probing work performed in levels C and B; no elevated readings registered for greater than five minutes.
- o No elevated off-site readings were registered.
- o Sheetpile wall construction performed in D and C.
- o Slurry wall trench excavation performed in level B; may be downgraded to level C.
- o Today is a good day to enter the staging area to observe slurry trenching since emissions are negligible; must sign-in and wear hard hats.
- o Verbal results on charcoal tube samples due today.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 8, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Approximately 200 sheets (490 lineal feet) driven; except for 80 lineal feet (approximately sheets 10 through 40) delayed due to EPA directive, all sheetpiling is driven to final grade or slightly deeper; Canonie will verify final plumbness and elevation when complete.
- o Canonie would like to finish driving sheets 10 through 40 on Thursday, October 10, 1991; no word has been given by Langan or EPA on status of analysis being performed on sludge samples taken in this area; Pat Evangelista will advise Canonie on action to be taken once analytical data is available; Canonie mentioned that debris probing has been completed below sheets 10 through 40; permission was given by Pat Evangelista to drive sheeting south of sheet 10.
- o No large debris present during slurry trench excavation from station 1+50 to 2+05; bottom grade is approximately 13.8 to 14.6 feet below ground surface; trench started on a slope to facilitate backfill placement; trenching operations halted due to hose breakage, but will resume shortly; Jerry Maresca expressed concern that Pete Porter was present in meeting while field activities were ongoing.

5.0 Miscellaneous and Old Business

- o Mark Seel and Jerry Maresca expressed a desire to have detailed QA/QC data presented at progress meetings.
- o Van Bares is present at site today; he will be at the site regularly during project; he had to leave the site late last week to receive a physical and OSHA training.

cc: Meeting Attendees per Attachment #1

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 15, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Sheetpile work has generally been performed in level D; upgraded to level C during start-up of work at southeast corner due to proximity of sludge release area and slurry wall operation; eventually downgraded to level D.
- o Slurry wall excavation performed in level B until noon of second day (Tuesday October 8, 1991) in order to meet health and safety plan requirements; air monitoring levels encountered did not require level B.
- o Slurry wall trench excavation was upgraded to level B due to emissions encountered on Wednesday October 9, 1991; this resulted in starting work on Thursday October 10, 1991 in level B.
- o Slurry was used to cover trench spoils on Saturday October 12, 1991; perimeter monitoring performed at Carolina Freight revealed emissions of no greater than 2 ppm.

4.0 QA/QC

- o Sheetpile wall checked for plumbness; approximately 13 sheets were found to be out of plumb; these sheets will be adjusted to meet the plumbness specification.
- o Submittals for all materials required to-date are on-file in Canonie's trailer.
- o Permeability sample was taken at Sta. 1+90; lab result is 1.4×10^{-7} cm/sec.; another permeability test was also performed prior to backfilling for Canonie's in-house purposes to ensure that our mixing procedure was satisfactory; the permeability of the Canonie in-house sample was 2.6×10^{-7} cm/sec.
- o Slurry wall trench excavation has generally been performed in excess of one foot deeper than the depth indicated on the construction drawings.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 15, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Canonie may propose expanding backfill mixing area towards the south; this expansion would be constructed in the same manner as the staging area; EPA stated that Canonie can submit this proposed modification with the personnel decontamination area modification proposal.
- o EPA is planning to obtain treatability study samples from the area near the north end of the site where Canonie is presently stockpiling the trench spoils; EPA requested that Canonie remove this material from areas where samples need to be obtained; Canonie requested a sketch from the EPA indicating the proposed sampling areas; EPA will submit comments on this issue after they receive the treatability work plans from Langan Environmental Services, Inc.
- o Pat Evangelista informed Canonie that final driving of the sheetpiling at the southeast corner of the site where the oily sludge was encountered could be initiated; final driving has to be performed in accordance with the following EPA directives:
 - 1. Sheets are to be driven to final grade or refusal, whichever comes first;
 - 2. Sheets are not to be lifted so that no sludge material will escape beneath the sheets;
 - 3. Plumbness and alignment tolerances are of secondary importance to achieving items 1 and 2 above.

cc: Meeting Attendees per Attachment #1

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 15, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from October 8, 1991 progress meeting were distributed to the attendees; no revisions were requested and the minutes were approved.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Sheetpile wall construction; completed preparatory work for slurry wall excavation; started slurry wall excavation at Sta. 1+50 and ended at Sta. 2+00 on Monday October 7, 1991.
 2. Continued sheetpile wall construction and slurry wall excavation; continued slurry wall excavation from Sta. 2+00 and ended at Sta. 2+80; started slurry wall backfill mixing on Tuesday October 8, 1991.
 3. Sheetpile wall construction reached northeast corner of site; started utilizing modified backfill mixing method; no slurry wall excavation performed; started stockpiling of trench spoils; received and mixed one bulk load of bentonite on Wednesday October 9, 1991.
 4. Sheetpile wall return completed at northeast corner of site; set required sheets to final grade; started return line at southeast corner of site and backfilling slurry wall; continued slurry wall trench excavation from Sta. 2+80 to 3+40 on Thursday October 10, 1991.
 5. Completed sheetpile wall construction with the exception of section on-hold due to EPA directive; cut drainage notches cut in sheetpile wall except for sections on-hold due to EPA directive; continued slurry wall excavation from Sta. 3+40 to Sta. 4+10; continued backfill placement to Sta. 2+70 on Friday October 11, 1991.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 15, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Continued slurry wall trench excavation from Sta. 4+10 to Sta. 5+10; continued backfill placement to Sta. 5+00; drum plugged with concrete at ends excavated at Sta. 5+10 of slurry wall and placed at T-5 roll-off; on Saturday October 12, 1991.
 7. Continued slurry wall trench excavation from Sta. 5+10 to Sta. 6+50; backfill placed from Sta. 5+00 to 6+00 on Monday October 14, 1991.
- o Work scheduled for this week includes:
1. Adjusting required sheetpiling to meet plumbness specification.
 2. Excavate slurry wall north of the main gate.
 3. Finish construction of second access road and activate.
 4. Start backfilling of sheetpile wall.
 5. Temporarily relocate personnel decontamination area to inside of storage building .
- o Curt DeWolf of Canonic showed how personnel decontamination area relocation was to be performed; personnel decontamination area would be inside the storage building; air monitoring will dictate when and how the proposed relocation would be performed; Pat Evangelista of the EPA indicated that he had no objection to using the storage building for the personnel decontamination area except that this area may prove to be too close to the slurry wall trench excavation; Canonic will instead place personnel decontamination area on the north side of the main gate; Pat Evangelista requested that a modification request be submitted addressing the relocation.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 22, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from October 15, 1991 progress meeting were distributed to the attendees; no revisions were requested and the minutes were approved.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued slurry wall trench excavation to Sta. 6+50 and backfill placement to Sta. 6+00 on Monday October 14, 1991.
 2. Continued slurry wall trench excavation to Sta. 7+10 and backfill placement to Sta. 6+30; adjusted twelve sheetpiles which were out of plumb on Tuesday October 15, 1991.
 3. Continued slurry wall trench excavation to Sta. 7+95 and backfill placement to Sta. 7+35; prepared main gate entranceway for slurry wall trench excavation on Wednesday October 16, 1991.
 4. Sheetpile driving in sludge area was re-started and later halted due to rain; continued slurry wall trench excavation to Sta. 8+50 and backfill placement to Sta. 8+30 on Thursday October 17, 1991.
 5. Initiated pre-excavation of slurry wall trench excavation along Paterson Plank Road, from north of main gate to approximately 20' from northwest corner of slurry wall; pre-excavation performed to break through an extremely dense upper layer and to find 3" diameter pipe encountered at north end of office building during mobilization; continued driving sheetpiling in sludge area; all sheets driven to final grade with the exception of sheets 29, 37 and 38; started backfilling behind sheetpile wall at north end; initiated construction of temporary personnel

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 22, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

decontamination area at north side of main gate; continued slurry wall excavation to Sta. 8+90 and backfill placement to Sta. 8+70 on Friday October 18, 1991.

6. Continued slurry wall trench excavation to Sta. 9+40 and backfill placement to Sta. 9+30; encountered and removed eleven inactive pipes/conduits during this construction; continued construction of the temporary personnel decontamination area on Saturday October 19, 1991.
7. Continued slurry wall trench excavation to Sta. 10+20 and backfill placement to Sta. 9+90; replaced main gate entranceway; received load of bentonite in "super bags" on Monday October 21, 1991.

- o Work scheduled for this week includes:
 1. Continue slurry wall construction.
 2. Continue placing backfill behind the sheetpile wall.
- o Canonie anticipates that the slurry wall operation will reach the sludge area behind the sheetpile wall at the southeast side of site within approximately 1-1/2 weeks.

3.0 Health and Safety

- o Level C protection utilized for all slurry wall trenching and backfilling.
- o Level B will be utilized once slurry wall operation rounds the northwest corner to go up Paterson Plank Road.
- o Un-sustained 20ppm readings were encountered at the northwest corner of the site during slurry wall trenching.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 22, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Off-site monitoring has been performed at Carolina Freight without any emissions encountered meeting action level.
- o Canonie has not received any additional calls from area businesses or residents with complaints or worries regarding site activities.

4.0 QA/QC

- o Sheets requiring plumbness and final grade corrections have been taken care of.
- o All but three sheets (29, 37 and 38) have been driven to final grade; sheets not driven to final grade are in the sludge area and will not be driven per directives from EPA; Canonie will perform analysis to determine what additional action is required for these sheets; some of the sheets in the sludge area are out of plumb but will not be adjusted, also in accordance with EPA directives; drainage notches for sheetpile wall are in per the project drawings; drainage notch locations will be indicated on as-built drawings.
- o All slurry in the hydration pond meets the specifications.
- o All in-trench slurry meets the specifications; fresh slurry is introduced into the trench whenever needed and removed slurry is wasted; this procedure has successfully been used to keep the unit weight of the in-trench slurry within specification.
- o Slump testing is being performed on each batch of backfill being mixed.
- o Trench is cleaned in front of backfill toe each morning.
- o Pockets of debris have been encountered throughout excavation.

WEEKLY PROGRESS MEETING MINUTES
OCTOBER 22, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o All permeability samples have met permeability specification.

5.0 Miscellaneous and Old Business

- o Langan representatives proposed having Canonie remove the plastic sheeting from over the sludge area and delineating the affected area in the presence of representatives from Langan, EPA and Canonie; sludge in delineated area would then be scraped and placed in an excavated pit lined with HDPE; pit will be constructed so that liner will be a homogeneous sheet and will not require any seaming; Langan estimates that excavated pit will need to hold approximately 10 cubic yards; Don Murphy of Langan is also considering some type of probing (i.e. borings or test pits using trench boxes) to determine extent of sludge; the sludge material recovered from well 7S and tested by DuPont can be treated at their waste water facility; Langan should provide a proposal to EPA tomorrow (Wednesday October 23, 1991) containing methods Langan would like to use for removing and containing the sludge.
- o ICF Kaiser's slurry wall expert, Mr. Biff Cummings, performed a review of Canonie's slurry wall operations and was pleased with all phases of this work.

cc: Meeting Attendees per Attachment #1

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
OCTOBER 29, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from October 22, 1991 progress meeting were distributed to the attendees; no revisions were requested and the minutes were approved.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Re-established main gate entrance to staging area; slurry wall trench excavated to sta. 10+05 and backfilled to sta. 9+90 on Monday October 21, 1991.
 2. Continued slurry wall trench excavation to sta. 10+72.5 and backfilled to sta. 10+40; continued backfilling behind sheetpile wall; received bulk shipment of bentonite; demobilized hammer and compressor on Tuesday October 22, 1991.
 3. Continued slurry wall trench excavation to sta. 10+97.5 and backfilled to sta. 10+75; continued backfilling behind sheetpile wall on Wednesday October 23, 1991.
 4. Continued slurry wall trench excavation to sta. 11+90 and backfilled to sta. 11+70; utilized foam machine for emissions control on Thursday October 24, 1991.
 5. Continued slurry wall trench excavation to sta. 12+60 and backfilled to sta. 12+50; continued utilizing foam machine for emissions control; pulled distressed section of sheetpile wall back in area where deepest pre-excavation was required on Friday October 25, 1991.
 6. Continued slurry wall trench excavation to sta. 13+17.5 and backfilled to sta. 13+10 on Saturday October 26, 1991.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
OCTOBER 29, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-193
(Continued)

7. Continued slurry wall trench excavation to sta. 14+55 and backfilled to sta. 14+30 on Monday October 28, 1991.
- o Work scheduled for this week includes:
 - 1. Continue slurry wall construction.
 - 2. Construct working bench for slurry wall construction along Peach Island Creek.
 - o Canonie utilized the CAT 225 and 235 to place backfill behind the sheetpile wall; Canonie is working on a method to correct the distressed sheetpile wall section; Canonie intended to continue slurry wall construction along creek with sheetpile wall in its present condition and perform final corrective measures afterwards; sheetpile wall calculation package is being prepared by Canonie and will be submitted to Langan.

3.0 Health and Safety

- o Level B protection utilized for all slurry wall trenching and backfilling performed along Gotham Parkway.
- o Canonie has continued perimeter monitoring.
- o Perimeter readings have been between 1 to 5 ppm (un-sustained) at perimeter fence along Gotham Parkway,
- o Backfill mixing performed in level D.
- o No vinyl chloride detected in perimeter bag samples.
- o Vinyl chloride concentrations have not reached 1 ppm in any bag samples collected to-date.
- o Canonie feels that highest VOC concentrations during slurry wall construction along Gotham Parkway are encountered after trench spoils are removed from backhoe bucket; foam has controlled emissions very well so far.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
OCTOBER 29, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Jerry Maresca of ICF Kaiser feels that VOC emissions along Gotham Parkway during slurry wall construction were of a more continuous nature.
- o Winds were problematic during slurry wall construction along Gotham Parkway since they were blowing north on Wednesday October 23, 1991 and stagnant the remainder of the week.
- o Temperature may or may not have an effect on the concentration of VOCs released; Langan mentioned that level C was required during previous drilling work performed during cool weather.
- o EPA would like to see an increase in the amount of perimeter air monitoring performed during oily sludge remediation.
- o EPA has met with Datability and Ralph Lauren to help alleviate their worries.
- o Canonie can continue off-site monitoring on adjacent properties as long as they don't interfere with their business operations.

4.0 QA/QC

- o Canonie has continued required QA/QC operations for the slurry wall as well as additional testing to maintain the quality of the in-trench slurry.
- o Permeability tests have continued to exceed the specification requirements.
- o Jerry Maresca requested copies of laboratory permeability results; Canonie provided copies of this data at the October 22, 1991 progress meeting and will also provide updated results as they become available from the laboratory.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
OCTOBER 29, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Mark Seel of Langan, Greg Hatt of Hi-Tech and Curt DeWolf of Canonie went to Carolina Freight to alleviate their concerns about bentonite blowing onto their property during periods of high wind; it was explained to their manager that the bentonite is not hazardous and Canonie offered to pay for car wash expenses for employees' cars; Canonie will alter their backfill mixing method to try and alleviate this problem; EPA will not require any modification submittal for alterations to the backfill mixing method; EPA requested that they be involved in meetings with neighboring businesses; winds on Monday October 28, 1991 were by the worst encountered and were the cause of the bentonite blowing over to Carolina Freight.
- o No slurry wall construction has been performed in the distressed area of the sheetpile wall; Canonie will submit a calculation package containing analysis and proposed solution to this problem.

cc: Meeting Attendees per Attachment #1

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 5, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from October 29, 1991 progress meeting were distributed to the attendees; minor revisions were requested and incorporated into the final meeting minutes for October 29, 1991.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued slurry wall trench excavation to sta. 14+55 and backfilled to sta. 14+30 on Monday October 28, 1991.
 2. Continued slurry wall trench excavation to sta. 15+20 and backfilled to sta. 14+85; discontinued slurry wall construction at this location due to distressed areas in sheetpile wall; continued construction of working bench along Peach Island Creek on Tuesday October 29, 1991.
 3. Continued construction of working bench along Peach Island Creek; no slurry wall construction was performed on Wednesday October 30, 1991.
 4. Started moving slurry wall trench spoils for final grading purposes; performed general site activities on Thursday October 31, 1991.
 5. Continued moving slurry wall trench spoils for final grading; started set-up of slurry wall for vertical liner installation on Friday November 1, 1991.
 6. Constructed berm from sta. 0+00 to sta. 1+50; continued moving for slurry wall trench spoils for final grading; started swale excavation at main gate and continued south on Monday November 4, 1991.

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 5, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Work scheduled for this week includes:
 - 1. Canonie will utilize only a skeleton crew for general site work.
 - 2. Continue with drainage swale construction.

3.0 Health and Safety

- o Level C and B protection utilized for all slurry wall trenching and backfilling, and moving of spoils; some operators stayed in level B by choice even though level C was sufficient.
- o Bench construction along Peach Island Creek performed in level B.
- o Swale excavation started in level C but was upgraded to level B.
- o Maximum off-site emissions encountered were un-sustained at 1 ppm.

4.0 QA/QC

- o Slurry wall excavated to approximately sta. 15+20; all slurry wall QA/QC tests meeting or exceeding the specifications; in-trench slurry is heavy and will be cleaned out and replaced prior to the continuation of slurry wall construction; in-trench slurry at sta. 15+00 currently possesses a Marsh Funnel viscosity of approximately 3-1/2 minutes and a unit weight of approximately 77 pcf.
- o Approximately 80 feet of trench has not been backfilled but contains slurry; this section has remained stable.
- o Slurry wall trench spoils are being placed in accordance with the grading plan; Canonie is also air drying this material during handling.

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 5, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie is assembling materials needed to raise wells and piezometers for final grading.
- o Sheetpile wall repair calculations have been submitted by Canonie to Langan and EPA for review.

5.0 Miscellaneous and Old Business

- o EPA has distributed sheetpile wall repair calculations internally and to ICF Kaiser; EPA will try to have a response to Canonie by Friday November 8, 1991.
- o "Oily" fluid problem proposal has been modified by EPA; Canonie asked whether a larger disposal pit could be constructed if more than two truckloads of material are excavated; Canonie said that it would take approximately three days to prepare for the "oily" fluid problem solution once we are given approval to start by Langan; Canonie will obtain additional HDPE in case the roll of on-site HDPE is not sufficient; Canonie will be allowed to stockpile excavated material on visqueen, if needed, until additional HDPE arrives at site; Pat Evangelista needs to know what Canonie's schedule is for the implementation of the "oily" fluid problem solution so that he may plan accordingly.
- o IRRDR does not address perimeter monitoring; EPA is preparing a position to off-site monitoring; this position will require perimeter emission standards of no greater than 1 ppm above background and sustained; the period of time defining readings as sustained was not available at this time; off-site monitoring will be performed at locations where people are at for prolonged periods of time; Canonie has controlled emissions to date with foam; Pat Evangelista mentioned the concern of the neighboring businesses, in particular Datability, with the operations at this site.

cc: Meeting Attendees per Attachment #1

100869

Canonie Environmental

WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 12, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from October 29, 1991 progress meeting and minutes from November 5, 1991 progress meeting were distributed to the attendees; minor revisions were requested and will be incorporated into the final meeting minutes for October 29 and November 5, 1991.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued moving trench spoils for final grading purposes; initiated drainage swale construction on Monday November 4, 1991.
 2. Continued swale excavation; staked drainage swale for excavation on north side of site on Tuesday November 5, 1991.
 3. Continued swale excavation; initiated demolition of concrete slab in front of storage building on Wednesday November 6, 1991.
 4. Initiated preparations for "oily" fluid area remediation; placed oil boom in Peach Island Creek and readied sorbent pads; spotted 12-packs in "oily" fluid area; readied water truck and foam machine; vacuum truck arrived at site; removed plastic sheets covering "oily" fluid area with CAT 225; Mark Seel of Langan Environmental Services, Inc. (Langan) initiated probing at 5' intervals with hand auger on Thursday November 7, 1991.
 5. Excavated a test hole in the "oily" fluid area along the slurry wall alignment and perpendicular to sheets 24 and 25; no "oily" fluid encountered in the test hole; removed visually contaminated soil from behind sheetpile wall in "oily" fluid area with CAT 225 and placed on PCB sludge pile; less than 5 cubic yards of contaminated material

WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 12, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

removed from "oily" fluid area; backfilled the test hole with imported fill from the bench area; no "oily" fluid placed in vacum truck; decontaminated outside of vacum truck prior to leaving site on Friday
November 8, 1991.

6. No field work performed on Monday November 11, 1991 due to union holiday.
- o Work scheduled for this week includes:
 1. Work on bench in "oily" fluid area.
 2. Gundle to set-up for driving vertical sheets.
 3. Pending approval for the sheetpile, Canonie will begin slurry wall construction at approximately Sta. 1+80 and continue north.
 - o All "oily" fluid remediation work was performed under the direction of the EPA.
 - o Canonie is awaiting NJDEP approval for sheetpile repair option utilizing stone.
 - o Pat Evangelista is not present at this progress meeting so he can work on review of sheetpile wall repair submittal from Canonie.

3.0 Health and Safety

- o Drainage swale work was performed in level C; upgraded to level B at northwest corner of site.
- o Bench construction along Peach Island Creek performed in level C.
- o "Oily" fluid remediation performed in level C; only background readings encountered during this work.
- o Concrete demolition in front of storage building performed in level C.

WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 12, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o As-built survey will be performed for drainage swale.
- o Gundle sent Canonie wrong Hydrotite samples for testing; samples failed the swell test referenced in the QAPP and specifications.
- o Slurry wall trench at north end along Peach Island Creek will be cleaned out, if needed, prior to resuming the construction.

5.0 Miscellaneous and Old Business

- o Langan will not be issuing a summary of events for the "oily" fluid remediation; the events as summarized in these minutes will stand as the summary of events.
- o The caps need to be placed on well cluster #2; caps are presently located next to wells.
- o NJDEP wants permits filed for all wells before Canonie can initiate raising and repairs; a licensed well driller may be required by NJDEP to perform this work; NJDEP feels that the permit process will take very little time since they have already studied the situation and are prepared to expedite the issue.

cc: Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Joseph E. Mihm - Canonie
Jim Semple - Canonie

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 19, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised final minutes from October 29, 1991 progress meeting, final minutes from November 5, 1991 progress meeting and minutes from November 12, 1991 progress meeting were distributed to the attendees; no revisions were requested and all minutes were approved.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. No work was performed on Monday November 11, 1991 due to a union holiday.
 2. Continued to construct working bench along Peach Island Creek at south end of site and demolition of concrete slab in front of storage building to facilitate construction of drainage swale on Tuesday November 12, 1991.
 3. Completed construction of working bench along Peach Island Creek; started mixing of slurry wall backfill; continued drainage swale construction on Wednesday November 13, 1991.
 4. Cleaned collapsed material from slurry-filled trench located from Sta. 14+30 to 15+15 and left open during shut-down; continued backfill mixing; excavated slurry wall trench from Sta. 2+00 to 1+10 and placed backfill to Sta. 1+10; some backfill splashed over the splash guard and on some Carolina Freight trailers; Canonie went to Carolina Freight and cleaned trailers on Thursday November 14, 1991.
 5. Canonie went to Carolina Freight to offer placing plastic on trailers that might be splashed by backfill; Carolina Freight decided to move trailers instead; placed backfill in slurry wall trench from Sta. 14+30 to 15+10; bailed out slurry with CAT 225 as backfill placement progressed;

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 19, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

also placed backfill in slurry wall trench to Sta. 0+50 on Friday November 15, 1991.

6. Continued slurry wall trench excavation from Sta. 0+25 to 18+15 and placed backfilled to Sta. 18+60; removed a drum encountered during slurry wall trenching at the southeast corner of site which appeared to contain paint or glue; drum was overpacked and placed next to T-5 roll-off; a CAT D25 off-road dump tipped and was righted on Saturday November 16, 1991.
 7. Continued slurry wall trench excavation from Sta. 18+15 to 17+42.5 and placed backfill to Sta. 18+00 on Monday November 18, 1991.
- o Work scheduled for this week includes:
 1. Continue slurry wall construction.
 2. Work with Gundle to co-ordinate delivery of equipment and materials so that installation of the Gundwall can be initiated.
 - o EPA should have approval for sheetpile repair calculations ready today; Pat Evangelista is not in attendance so that he can finalize approval; Canonie has all equipment for sheetpile repair present at site; slurry wall construction will be stopped until review of sheetpile wall repair calculations by EPA.
 - o Canonie feels that the December 31, 1991 demobilization date may slip.

3.0 Health and Safety

- o Working bench construction, slab demolition and slurry wall trenching were performed in level C.
- o Readings taken during air monitoring were generally unsustained at levels of less than 2ppm above background.

100874

FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 19, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Unsustained air monitoring readings of 1 to 4ppm above background were encountered while monitoring slurry wall trench spoils at southeast corner of site.
- o Only background readings were encountered during perimeter monitoring.
- o Unsustained air monitoring readings of less than 5ppm above background were encountered during site grading.
- o OVA detected background readings of suspected methane.

4.0 QA/QC

- o Cleaned collapsed material from slurry-filled trench prior to re-initiating slurry wall construction activities from Sta. 14+30 to 15+10.
- o Caved area of slurry wall trench from Sta. 18+65 to 18+50 was cleaned out with CAT 225 positioned across trench on mats.
- o Slurry wall backfill permeability sample taken at Sta. 0+50; sample from Sta. 18+50 will be taken within the next couple of days.
- o All permeability samples have exceeded the specifications to-date.

5.0 Miscellaneous and Old Business

- o Approval of sheetpile wall repair calculations should be forthcoming today.
- o Steve MacGregor (NJDEP) does not know the status of the permits for the existing wells; Pam Lange will be consulted this week to determine status.

cc: Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEP
Joseph E. Mihm - Canonie

100875

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 26, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-190

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from November 19, 1991 progress meeting were distributed to the attendees; minor revisions were requested and will be incorporated into the final meeting minutes for November 19, 1991.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 - 1. Excavated slurry wall trench from Sta. 18+15 to 17+42.5 and backfilled to Sta. 18+00; stockpiled trench spoils on Monday November 18, 1991.
 - 2. Excavated slurry wall trench from Sta. 17+42.5 to 16+77.5 and backfilled to Sta. 16+77.5; used CAT 225 on mats to clean out slurry wall trench as needed; CAT 225 and 235 both required repairs and had to be shut-down; CAT 235 was repaired on Tuesday November 19, 1991.
 - 3. CAT 225 was repaired; excavated slurry wall trench from Sta. 16+77.5 to 16+45 and backfilled to Sta. 16+85; graded surface inside slurry wall along Paterson Plank and Carolina Freight sides of site in preparation for Gundle equipment and crew; received approval to implement sheetpile wall repairs on Wednesday November 20, 1991.
 - 4. Implemented sheetpile wall repairs to the deflected area between Sta. 3+55 to 3+90 as follows:
 - a. Held waler against outside face of sheets with CAT 225.
 - b. Connected two cables to waler and connected one cable each to CAT D25 dumps.
 - c. Removed backfill from inside of sheets.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
 NOVEMBER 26, 1991
 SCP CARLSTADT SUPERFUND PROJECT
 90-198
 (Continued)

- d. Pulled sheets inward using D25 dumps.
- e. Tack welded waler to sheets.
- f. Placed riprap in void along outside of sheets.
- g. Relieved tension from cables and disconnected form dumps.
- h. Connected both cables to water truck and applied tension.
- i. Backfilled inside of sheets to re-establish the working bench.
- j. Laid mats and commenced with slurry wall construction.

Excavated slurry wall trench from Sta. 16+45 to 16+20 and backfilled to Sta. 16+40 on Thursday November 21, 1991.

- 5. Experienced rain throughout the day; excavated slurry wall trench from Sta. 16+20 to 15+65 and backfilled to Sta. 15+80; very large rock slabs removed during excavation on Friday November 22, 1991.
- 6. Implemented sheetpile wall support to the deflected area between Sta. 4+15 to 4+38 as follows:
 - a. Tacked waler against outside face of sheets.
 - b. Connected both cables to loader and applied tension.
 - c. Laid mats and commenced with slurry wall construction.

Excavated slurry wall trench from Sta. 15+65 to 15+15 and backfilled to Sta. 15+35 on Saturday November 21, 1991.

- 7. Completed remaining slurry wall backfilling on Monday November 25, 1991.

o Work scheduled for this week includes:

- 1. Site grading activities.
- 2. Grade working area along inside of slurry wall.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 26, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3. Grade and/or remove spoils from along creek side of site.
 4. Complete sheetpile wall repairs.
- o Gundle may start on Gundwall installation on Tuesday December 3, 1991; all Gundwall sheets are fabricated and insertion plate is constructed.
 - o Horizontal liner placement should start approximately 7 to 10 days following start-up of Gundwall operation.
 - o EPA is planning to perform soil/debris sampling mid-December; EPA will sample at between 2 to 6 feet below ground surface and will require enough material to fill 3 to 6 55-gallon drums.
 - o Canonie is currently revising the construction schedule for submission to Langan; demobilization is expected to be completed in mid-January of 1992.

3.0 Health and Safety

- o Slurry wall construction and site grading was performed in level C even though emission levels requiring only level D was encountered; EPA field representative confirmed this condition.
- o Drainage swale construction performed in level C.
- o First site accident was reported; worker aggravated a chronic back strain while emptying a trash can containing PPE.

4.0 QA/QC

- o Slurry wall excavation and backfill completed; caved material was cleaned from trench prior to backfilling.
- o All QA/QC test results have met or exceeded specifications; copies of the permeability test results were distributed to the attendees; final permeability sample was taken at Sta. 16+00 and is presently being tested; preliminary results for this sample should be ready Wednesday November 27, 1991.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 26, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Gundle has completed fabrication of vertical HDPE sheets; insertion plate has been constructed; Canonie will inspect the Gundwall sheets upon their arrival; Hydrotite "T" Type tests were completed by Canonie; this material is presently on-site; test results will be provided to Mark Seel.
- o Sheetpile wall repairs were performed in accordance with Canonie's repair submittal; washed stone still needs to be placed behind sheets from Sta. 4+15 to 4+38.
- o Langan representative asked if large stone sticking out of ground next to slurry wall along creek will be removed; Canonie stated that this rock will be pulled out utilizing a choker and the CAT 225, and the resulting void will be backfilled with slurry wall backfill; EPA representative asked if this would sacrifice the integrity of the slurry wall; Canonie responded that the thickness of the slurry wall will be increased in this area thereby providing added integrity to the slurry wall.

5.0 Miscellaneous and Old Business

- o Rachelle Polley will not be at the site on Friday November 29, 1991; her position will be assumed by another H&S Officer from another Canonie site; he will be briefed on the project prior to starting.
- o No approval has been granted for relocated decontamination pad (Modification No. 11); approval is forthcoming from EPA.
- o No approval has been granted for Gundwall top-of-sheet modification (Modification No. 9); approval should be forthcoming from EPA.
- o EPA approval for Hydrotite modification (Modification No. 13) has been provided to Langan; this letter will be copied to Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
NOVEMBER 26, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Well raising/repair submittal has been copied to EPA by Langan; NJDEPE has not yet received a copy; Canonie stated that it important that this submittal be evaluated as soon as possible since site grading is under way and this work must be performed soon; NJDEPE representative felt that this submittal should be approved fairly easily.
- o Canonie will submit a modification request for some minor changes to the grading plan.
- o Canonie is also waiting for approval for the utilization of the electric pumps.
- o EPA representative stated that he feels all modification requests should be approved easily.

cc: Meeting Attendees per Attachment #1
Jim Semple - Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 3, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from November 26, 1991 progress meeting were distributed to the attendees; minor revisions were requested and will be incorporated into the final meeting minutes for November 26, 1991.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Cleaned caved material from slurry wall trench from sta. 15+47.5 to 15+25; completed backfilling of slurry wall trench on Monday November 25, 1991.
 2. Initiated placement of large debris and rubble in slurry pond and decontaminating slurry wall equipment; completed drainage swale excavation; some additional minor grading may be required for swale following completion of the Gundwall installation; started minor grading of PCB pile to promote improved runoff; worked on site grading along Peach Island Creek on Tuesday November 26, 1991.
 3. Continued placement of large debris and rubble in slurry pond and site grading; started decontamination of CAT 225 and heat tracing trailer pipes; 24" diameter PVC pipe to be used for well boxes arrived at site in 20' lengths which will be cut to the required lengths; CAT D-6 arrived at site on Wednesday November 27, 1991.
 4. Thanksgiving holiday; no work performed on Thursday November 28, 1991.
 5. Continued site grading, grading of the PCB pile to promote improved runoff and decontamination of CAT 225 on Friday November 29, 1991.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 3, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Initiated placement of gabion baskets along Peach Island Creek; continued site grading and decontamination of CAT 225 on Monday December 2, 1991.
- o Work scheduled for this week includes:
 1. Complete placement of gabion baskets.
 2. Continue with site grading.
 3. Mobilize Gundle crew and assemble equipment in order to attempt driving Gundwall sheets on Friday December 6, 1991.
 - o Decontamination of CAT 235 should be completed on or about Friday December 6, 1991; Canonie will demobilize CAT 235 following decontamination; the CAT 235 can not be used for 5 days after the operator is laid-off; EPA would like to excavate samples with the CAT 225 on or about Tuesday December 10, 1991 or Wednesday December 11, 1991; Canonie was advised not to alter any schedules concerning the demobilization of the CAT 235 since the EPA's sampling schedule is still uncertain.

3.0 Health and Safety

- o Slurry wall construction performed in levels C and D; no air emissions were encountered above background.
- o Emissions of 1 to 3 ppm above background encountered during handling of materials in stockpile of slurry wall trench excavation spoils located at north end of site on Tuesday November 26, 1991.
- o Excavation of swale along Carolina Freight was excavated in levels C and D; no readings were encountered above background.
- o No emissions encountered during movement of debris from stockpiles to slurry pond.
- o Emissions of 4 ppm above background encountered during grading of PCB pile on Wednesday November 27, 1991.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 3, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Last slurry wall permeability sample taken at sta. 16+00; preliminary permeability result was 6.4×10^{-8} ; GSI will finalize permeability results table.
- o Gundwall sheets were inspected upon their delivery; crane was utilized to unload Gundwall equipment so that sheets were not damaged; all Hydrotite samples have been tested and exhibited diameter expansions of between 1.2 to 1.5 times; these Hydrotite sample results meet the modified interlock seal expansion specification.

5.0 Miscellaneous and Old Business

- o Empire Drilling was sent well permit applications via overnight delivery; a registered well driller from Empire will prepare the permit applications and send them to the NJDEP; Empire will call Canonie if additional information is required to prepare the permit applications.
- o NJDEP is currently reviewing the modification request involving the raising/repairing of the wells and piezometers (modification request no. 12).
- o No reply has been given by EPA concerning the proposed adjustments to the final grading (modification request no. 14) or the additional electric pump information.
- o CAT 235 accidentally backed into a relief trench excavated perpendicular to the slurry wall at sta. 15+20; the location where the CAT 235 backed in the trench will be inspected once again to ensure that the integrity of the slurry wall was not sacrificed.
- o Piezometer P-14 may have been damaged by the CAT 235 during site grading and will be inspected by Canonie, EPA and Langan field staffs to determine the extent of damage; piezometers P-8, P-9 and P-14 require repairs; Pam Lange will speak with Linda Welkom of NJDEP so that repairs not listed in modification no. 12 can be performed without submission of additional modification requests.

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 10, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from November 26, 1991 progress meeting and meeting minutes from December 3, 1991 progress meeting were distributed to the attendees; minor revisions were requested and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Started installation of gabion baskets along Peach Island Creek; continued site grading and decontamination of the CAT 225 on Monday December 2, 1991.
 2. Started grading area between the sheetpile wall and slurry wall, but stopped due to rain; continued decontamination of CAT 225; set-up CAT D-6 for level B; no slurry wall damage was observed in area of relief trench at Sta. 15+20 where CAT 235 accidentally backed into; this inspection was performed by Canonie on Tuesday December 3, 1991.
 3. Rain, sleet and snow inhibited work; demobilized air compressor; mobilized a pressure washer to help increase the efficiency of decontamination procedures; received delivery of Gundle materials; mobilized spotter frame, hammer and compressor for Gundwall operation; demobilized CAT 225; started decontamination of CAT D25 dump on Wednesday December 4, 1991.
 4. Continued decontamination of CAT D25; set-up pressure washer; completed gabion basket installations using CAT 235 on Thursday December 5, 1991.
 5. Constructed a working bench next to the slurry wall along Peach Island Creek for use by Gundle; demobilized one CAT D25; started

FINAL WEEKLY PROGRESS MEETING MINUTES
 DECEMBER 10, 1991
 SCP CARLSTADT SUPERFUND PROJECT
 90-198
 (Continued)

decontamination of second D25 on Friday
 December 6, 1991.

6. Continued decontamination of second CAT D25 and grading activities at the southeast corner of the site; Gundle project manager arrived in town and finished agreement with Dockbuilders union on Monday December 9, 1991.

- o Work scheduled for this week includes:
 1. Dockbuilders and Laborers will set-up Gundwall equipment and start driving sheets.
 2. Continue decontamination of equipment.
 3. Remove silt fence from the north, south and west sides of site in order to start excavation of anchor trench for horizontal liner.
 4. Assist Foster-Wheeler with their sampling activities.

3.0 Health and Safety

- o Gabion installation performed in level D.
- o Operating engineers performing site grading worked in level B; un-sustained emissions of 5 to 15ppm above background in vicinity of the PCB sludge pile and north spoils pile.
- o Off-site emissions were less than 1ppm above background.

4.0 QA/QC

- o Piezometer P-14 was uncovered after being snapped during removal of soil from around this piezometer; Canonie's inspection revealed no visible damage

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 10, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

beyond requiring the addition of a riser section.

- o No visible slurry wall damage was evident in the area of the relief trench at Sta. 15+20 where the CAT 235 accidentally backed into; it did not appear the track of the CAT 235 infringed on the slurry wall.
- o Canonie is working on a calculation package addressing the deflected sheetpile areas.
- o Pat Evangelista of the EPA asked if the CAT 235 backing into the relief trench caused the breakage of the P-14 PVC riser pipe; Canonie informed him that P-14 was damaged by removing the soil from around the piezometer, thereby causing the eccentric weight of the protective concrete casing to snap the riser.
- o Canonie has not specified the repairs required for P-14 at this time; we will try to perform this assessment when a NJDEP representative is at the site; Pam Lange of NJDEP will check to see when Linda Welkom is available to come to the site to help with this evaluation; Pat Evangelista requested that he be provided with a one week advance notice of when well/piezometer modifications and repairs will be performed; Canonie informed Pat that this work will probably start after EPA provides approval of the proposed modifications and repairs.

5.0 Miscellaneous and Old Business

- o Pat will provide Canonie with replies to modification requests addressing cold weather seaming, well/piezometer raising and repairs, and site grading Friday December 13, 1991; EPA should also have a response to Canonie's submittal containing additional dewatering pump information.
- o Approval of well permits by NJDEP are still pending; no complications are expected with these permits.

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised final minutes from November 26, 1991 progress meeting, final meeting minutes from December 3, 1991 progress meeting and meeting minutes from December 10, 1991 progress meeting were distributed to the attendees; minor revisions were requested for the December 10, 1991 meeting minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued decontamination of the D25 dump and grading activities at the southeast corner of the site on Monday December 9, 1991.
 2. Foster-Wheeler (F-W) on site to perform soil sampling; Canonie supplying F-W with equipment and personnel as needed by F-W; Gundle attaching spotter frame to crane; D25 was demobilized; started decontamination of water truck on Tuesday December 10, 1991.
 3. Gundle continued set-up of crane; F-W started screening of material excavated from PCB sludge pile; continued site grading on Wednesday December 11, 1991.
 4. Completed decontamination of water truck; started decontamination of CAT D6 dozer; continued site grading; Gundle attempted to install first Gundwall sheet at Sta. 5+10 but encountered problems with adhesion of sheets to insertion plate on Thursday December 12, 1991.
 5. Started modifications to insertion plate and welding additional anchors to the Gundwall sheets; continued decontamination of the D6; started excavation of the infiltration liner anchor trench on Friday December 13, 1991.

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Received two loads of Gundwall sheets; continued modifications to the insertion plate and excavation of the anchor trench on Monday December 17, 1991.

- o Work scheduled for this week includes:
 1. Continue Gundwall installation.
 2. Continue anchor trench excavation.
 3. Continue site grading.

3.0 Health and Safety

- o Rachelle Polley was unable to attend the Progress Meeting; no significant Health and Safety issues arose during the previous week.

4.0 QA/QC

- o No significant QA/QC issues arose during the previous week.
- o Canonie overviewed the anchor trench excavation to be sure it conformed to the minimum dimensions required.
- o Canonie also overviewed site grading activities to be sure this work was performed in conformance with the project specifications and construction drawings.

5.0 Miscellaneous and Old Business

- o Gundle is going to utilize an additional anchor welded approximately one foot above the bottom anchor in an attempt to try and secure the Gundwall sheets in the trench; Gundle will also be using a tensioning frame with a come-along to keep the previously placed Gundwall sheet from being driven down during driving of the next adjacent sheet.

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 17, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Mike Miller of the NJDEP has not been in contact with Pam Lange regarding the well permits, therefore, no problems are foreseen with their approval; Canonie has permission to proceed with well and piezometer repairs/raisings in anticipation of approval of permit requests.
- o Canonie expressed concerns over field judgement, as well as Health and Safety practices employed by F-W sampling crew; F-W excavated in more areas and deeper than they originally informed Canonie; these excavations will require Canonie to spend considerable time to restore and may become extremely soft after being exposed to precipitation, regardless of how well the restorative work is performed; Hi-Tech's field personnel did not feel comfortable with F-W's Health and Safety; they allowed the CAT 235 operator to work in level D when level C was actually required; Canonie has requested F-W to stake excavations so they can be surveyed and recorded.
- o Sheetpile wall stabilization calculations are forthcoming from Canonie; these calculations will address the measures to be implemented at the deflected areas.
- o Approval of the modification request concerning fencing materials is still outstanding.
- o Langan will contact the owner of the adjacent industrial park, Mr. Wilson, to see if he will allow us to utilize his lot on Gotham Parkway in exchange for the PRP group paying for the insertion of slats in the fence along Gotham Parkway; Canonie may also offer to remove trees from the area outside of this fence; Langan also mentioned that they are proposing the installation of a gate in the fence to be erected along Peach Island Creek; this gate will be for boat access to the creek.

cc: Progress Meeting Attendees per Attachment #1
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from December 10, 1991 progress meeting and meeting minutes from December 17, 1991 progress meeting were distributed to the attendees; no revisions were requested for these minutes; a revision to the minutes from the December 3, 1991 progress meeting was requested to correct a preliminary permeability reading reported to be 6.4×10^{-4} cm/sec; this permeability reading will be corrected to 6.4×10^{-8} cm/sec.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Received two loads of Gundwall sheets; continued modification of insertion plates and extrusion welding secondary anchors to the Gundwall sheets; continued anchor trench excavation on Monday December 16, 1991.
 2. Drove first nine Gundwall sheets starting at Sta. 5+10; assisted Foster-Wheeler (F-W) with sampling excavation; graded PCB sludge pile area where F-W sampled; continued anchor trench excavation on Tuesday December 17, 1991.
 3. Back-dragged site with dozer to help with drying out soils; continued decontamination of CAT D-6 and anchor trench excavation; drove 20 Gundwall sheets; surveyors at site to obtain as-built alignment and width of slurry wall on Wednesday December 18, 1991.
 4. Received 51 rolls of geotextile for infiltration barrier; closed main entrance to staging area and activated second gate at south end of site; removed spotter frame from crane; drove 19 Gundwall sheets on Thursday December 19, 1991.
 5. Performed repairs to hammer compressor; drove 15 Gundwall sheets; continued grading north side of site and anchor trench excavation on Friday December 20, 1991.

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Continued driving Gundwall sheets; started clearing materials and equipment from northern half of staging area to prepare for removal of crushed stone from this area.
- o Work scheduled for this week includes:
 1. Today will be a half-day in observance of Christmas Eve.
 2. Continue Gundwall installation.
 3. Continue clearing equipment and materials from staging area.
 4. Remove crushed stone from staging area and re-establish decontamination pad at south end of site following decommission of decontamination pad in vicinity of north entrance gate.
 5. Continue decontamination of equipment.
 - o Canonie requested utilizing crushed stone from staging area as-needed for the infiltration barrier anchor trench; Gerry Coscia of Langan felt that this may be possible and Canonie should submit a modification regarding this issue; Canonie also asked whether any of this material could be used to grade the parking areas outside the fence line; Gerry didn't feel that the crushed stone from the staging area was necessary.
 - o Gerry Coscia of Langan also stated that the PRPs are willing to pay for the slats to be placed in the fence along Gotham Parkway if Wilson Associates allows us to use their lot across from the site; PRPs want a proposal for the cost of the slats and the gate allowing creek access; the PRPs want these items to be invoiced directly to them.

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Rachelle Polley at home for Christmas holiday; Bill Goodrich acting as her replacement; Bill is the Health and Safety Officer at our Textron site.
- o Anchor trench excavation was performed in level D; F-W operated in level C during sampling operations on Monday December 16, 1991.
- o Gundwall installation performed in level D; grading work was performed in level C; F-W required level B for filling Shelby tubes and level C for all other sampling activities on Tuesday December 17, 1991.
- o Gundwall installation performed in level D on Wednesday December 18, 1991 and Thursday December 19, 1991.
- o Site grading performed in level C; un-sustained readings of 1 to 2ppm encountered in staging area during grading requiring an upgrade for work performed in affected half of the staging area; Gundwall installation performed in level C and level D.

4.0 QA/QC

- o The infiltration geotextile is on-site and meets the specifications; a partial shipment of the infiltration barrier geomembrane will be delivered on Thursday December 26, 1991; the production specifications for this material will be submitted to Canonie by the manufacturer, NSC.
- o Gundwall installation is being performed according to specification; all required QA/QC operations are being performed; concern arose over swelling capacity of Hydrotite while using Wesson oil as a lubricant; Canonie performed a swelling test with a Hydrotite section coated with Wesson oil and soaked in water; the diameter of the sample specimen increased approximately 1.42 times in 48 hours; the results of this test were approximately equal to those obtained using un-coated Hydrotite in slurry; Langan performed a similar test which provided equivalent results; concern

100892

Canonie Environmental

FINAL WEEKLY PROGRESS MEETING MINUTES
DECEMBER 24, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

was also expressed over the elongation of the Hydrotite during insertion; Canonie explained how the Hydrotite possesses adequate swelling capacity to fill the interlock annulus even after this elongation occurs; Canonie will prepare a calculation brief summarizing why elongation is not a concern; Gerry Coscia of Langan expressed that he would prefer the use of the Wesson oil as a lubricant since it does not appear to reduce the swelling capacity of the Hydrotite but seemingly reduces the Hydrotite elongation during insertion.

5.0 Miscellaneous and Old Business

- o Canonie has not received any correspondence from the EPA or NJDEP regarding the findings of their Tuesday December 17, 1991 field investigation of MW-1S and MW-6S; Canonie will therefore submit a proposal outlining their recommended course of action.
- o All modifications up to Modification No. 17 (fencing material) have been approved; no problem with the approval of the fencing modification is foreseen.
- o Canonie will submit a modification addressing the use of the staging area crushed stone for the anchor trench.
- o F-W sample drums will need to be brought to the front of the site and decontaminated so they can be transported off-site.
- o Some PPE was blown out of roll-off and onto the staging area; some PPE was also present in the exclusion zone; this material will be collected by Canonie and placed securely into roll-off.

cc: Progress Meeting Attendees per Attachment #1
Pam Lange - NJDEP
Pat Evangelista - USEPA
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 31, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

Monday December 30, 1991, however, the Hydrotite had been severed approximately 6-feet below the top of the sheet; Gundle is shipping 4-mm Hydrotite to the site; this material will fit into the interlock down to the point of termination for the 6-mm Hydrotite and still provide satisfactory sealing of the interlock; Canonie will perform an expansion test with this material to confirm it's acceptability for this repair; if additional repair is required, Gundle will weld a section of HDPE on either side of the affected interlock section and fill the annular space with Hydrotite caulk.

- o Work scheduled for this week includes:
 1. Continue installation of the Gundwall sheets.
 2. Decontaminate additional equipment not required for remaining activities.
 3. Relocate decontamination pad to an area in the vicinity of the south entrance gate.
 4. Initiate site grading in area where staging area has been dismantled.

3.0 Health and Safety

- o Dismantling of staging area and Gundwall installation has been performed in level D.
- o Air monitoring has detected only background levels during on-site monitoring.
- o Emissions were detected inside of the existing storage building in the area where the abandoned showers are located; emissions were found to be emanating from a drain pipe; a bag sample from this location detected 2ppm of vinyl chloride; this drain was plugged and is no longer releasing emissions.

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 31, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Gundwall sheets are being installed with all QA/QC activities being performed in accordance with the Technical Specifications and QAPP.
- o The manufacturer's specifications for the geotextile are on file in the Canonie trailer.
- o The specifications for the infiltration barrier geomembrane are being forwarded to Canonie by NSC; these specifications were prepared for the material delivered to the site.

5.0 Miscellaneous and Old Business

- o The sheetpile remediation for the deflected areas will not be approved by the EPA until approval is received from the NJDEP stream encroachment reviewers; EPA has told Langan that NJDEP has informed them that they have concerns over the remediation proposal by Canonie; Canonie stated that they have been in direct contact with the NJDEP reviewers and there does not seem to be any problem with our proposal to them; the only item NJDEP informed Canonie they required for approval was an additional drawing from Canonie, which is currently being prepared.
- o Canonie requested that an on-site ICF Kaiser representative contact Pat Evangelista in order to clarify whether the EPA was requiring a licensed New Jersey well driller for work simply involving the adding of casing sections to the wells and piezometers.
- o Langan stated that they have not received the final permeability result table; Canonie will transmit this table to Langan and ICF Kaiser.
- o Langan also stated that they want a copy of Canonie's Gundwall QA/QC data regarding the Gundwall installation; Canonie will prepare a table with this information and transmit it to Langan.

WEEKLY PROGRESS MEETING MINUTES
DECEMBER 31, 1991
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie will be submitting modification requests for utilization of additional HDPE anchors for the Gundwall sheets and staging area crushed stone for backfill in the infiltration barrier anchor trench.
- o Extra Work Orders (EWOs) concerning assistance provided to Foster-Wheeler (F-W) by Canonie should be submitted to Langan for review; Langan feels that the EWOs should only include charges for two days of laborer time; the EWOs will outline all Canonie charges for F-W assistance.
- o Canonie will submit a proposal to Langan outlining the replacement of the monitoring wells MW-1S and MW-6S; Canonie will not schedule the drillers for initiating the well and piezometer raising/repairs until approval is received for EPA for the replacement proposal.
- o Canonie is anticipating project completion at approximately the end of January.
- o A meeting is planned for next Tuesday between Langan, the EPA and an owner of a business across Peach Island Creek from the site to discuss his perceived problems involving flooding of his parking lot due to construction of the sheetpile wall.

cc: Progress Meeting Attendees per Attachment #1
Pam Lange - NJDEP
Pat Evangelista - USEPA
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

100896

Canonie Environmental Services, Inc.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from December 31, 1991 progress meeting were distributed to the attendees; no revisions were requested; Gerry Coscia of Langan provided his edits to the December 24, 1991 minutes following the progress meeting; these edits will be incorporated to the December 24, 1991 progress meeting minutes and distributed.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued equipment decontamination; 28 Gundwall sheets installed on Monday December 30, 1991.
 2. Continued decontaminating equipment; graded site with dozer where possible; worked on mechanical problems with crane, which caused a shut-down of Gundwall operations at 14:15; 24 Gundwall sheets installed on Tuesday December 31, 1991.
 3. Observance of New Years Day; no work.
 4. Continued equipment decontamination; received 9 rolls of HDPE for infiltration barrier; no Gundwall driven due to repairs being performed on crane; Gundle worked on cutting installed Gundwall sheets down to grade on Thursday January 2, 1992.
 5. Continued equipment decontamination; completed repairs to crane; completed cutting installed Gundwall sheets to grade; a problem was encountered with sheet #219; this sheet could only be driven part of the way down; Gundle attempted to remove this sheet but was unsuccessful; 18 Gundwall sheets installed on Friday January 3, 1992.
 6. Continued equipment decontamination; removed sheets #219 from adjoining interlock; sheet #219 left in trench; drove a replacement sheet for #219; 13 Gundwall sheets installed on Monday January 6, 1992.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

7. Kelly Linton of Gundle is planning to be present on-site Wednesday January 7, 1992 to help with installation of 4-mm Hydrotite in interlocks where larger Hydrotite was lacking; Gundle should be finished with Gundwall installation early next week; started relocation of equipment decontamination pad to area adjacent to south entrance gate; surveyors on site to perform as-built of Gundwall alignment on Tuesday January 7, 1992.
- o Curt DeWolf of Canonie explained that areas where 4 or 5-mm Hydrotite is required at the top of interlocks in eight Gundwall sheets were determined using machinists wire; the reason why the 6-mm Hydrotite did not reach the top of the interlock is not known, except for the interlock between sheet #134 and #135, where the 6-mm Hydrotite was severed when the interlocks separated during driving; shortness of Hydrotite is theorized to have been caused by relaxation of the Hydrotite after initial stretching during installation and/or a breakage in the Hydrotite caused by incomplete cutting of the interlock at the ground surface which caused the Hydrotite in the remaining interlock to break at a weak point during removal of the above grade portion of the Gundwall sheet whose interlock was not adequately cut.
 - o Work scheduled for this week includes:
 1. Continue installation of the Gundwall sheets.
 2. Decontaminate additional equipment not required for remaining activities.
 3. Finish relocating decontamination pad to an area in the vicinity of the south entrance gate.
 4. Initiate site grading in area where staging area has been dismantled.

3.0 Health and Safety

- o Air monitoring levels were at background levels during Gundwall installation and grading work.

100898

Canonie Environmental

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o One dockbuilder suffered a strained knee due to the muddy conditions at the site.

4.0 QA/QC

- o The installation of either 4 or 5-mm Hydrotite will be performed as discussed previously; an expansion test will be performed on this Hydrotite upon its arrival at the site.
- o Gundwall sheets are being installed with all QA/QC activities being performed in accordance with the Technical Specifications and QAPP.
- o Copies of the final permeability results for the slurry wall backfill performed by GSI were distributed to the attendees.

5.0 Miscellaneous and Old Business

- o Modifications for use of crushed stone for backfill of anchor trench and additional Gundwall anchor will be submitted by Canonie.
- o Modifications for additional gates requested by Langan and for coupling at top of 10,000 gallon tank to aid Langan with sampling need to be prepared.
- o EPA has not provided approval for driving of H-piles along deflected areas at north end of sheetpile wall; Canonie has not been provided with any written approval from NJDEP; Canonie was under the impression that the approval letter was going to be sent directly to EPA; Pam Lange will make inquiries to find out the status of the NJDEP approval letter.
- o Approval for replacement of monitoring wells MW-1S and MW-6S has not been approved; Pat Evangelista of EPA just received the modification proposal for these wells prior to the progress meeting.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Gerry Coscia of Langan stated that a section of the sheetpile wall including sheets #54, #55 and #56 had deflected; these were measured using a carpenter's level by Mark Seel of Langan; Canonie will evaluate this situation and provide Langan with a response.
- o Grading is controlling the progress of the infiltration barrier construction.
- o Pete Porter of Canonie is evaluating the HDPE specifications from NSC and will forward these to EPA.

cc: Progress Meeting Attendees per Attachment #1
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from December 24, 1991 progress meeting and meeting minutes from January 7, 1992 progress meeting were distributed to the attendees; no revisions were requested for the December 24, 1991 minutes; minor edits were requested for the January 7, 1992 minutes; these edits will be incorporated into the January 7, 1992 progress meeting minutes and distributed.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued equipment decontamination; installed 13 Gundwall sheets on Monday January 6, 1992.
 2. Started relocation of the equipment decontamination pad to a location adjacent to the south entrance gate; surveyors were present to perform as-built of Gundwall alignment; drove 31 Gundwall sheets on Tuesday January 7, 1992.
 3. Completed relocation of decontamination pad to area adjacent to south entrance gate; continued removal of crushed stone from staging area PVC membrane; installed 32 Gundwall sheets on Wednesday January 8, 1992.
 4. Excavated anchor trench and swale adjacent to north entrance gate alignment; started re-alignment of anchor trench and swale inside manhole at northeast corner of site; started installation of 5-mm Hydrotite in required interlocks; installed 29 Gundwall sheets on Thursday January 9, 1992.
 5. Completed re-alignment of anchor trench and swale inside manhole at northeast corner of site; completed installation of 5-mm Hydrotite in required interlocks; received 10 H-piles for driving in deflected areas at north end of

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

sheetpile wall; decontaminated Foster-Wheeler sample drums; NSC crew at site for 8-hour health and safety refresher course; continued removal of crushed stone from staging area PVC membrane; drove final Gundwall sheet on Friday January 10, 1992; the final Gundwall sheet was approximately 32 inches wide.

6. Cut-off Gundwall sheets to just above ground surface; gathered excess Gundwall sheets from site and stockpiled near decontamination pad; continued removal of crushed stone from staging area PVC membrane on Monday January 13, 1992.
- o Work scheduled for this week includes:
1. Raise/repair required monitoring wells and piezometers.
 2. Drive H-piles for additional stabilization of deflected areas of sheetpile wall.
 3. Start covering slurry wall with geotextile and soil.
 4. Tentative start-up for NSC.
- o 5-mm Hydrotite had already expanded to approximately 5.2-mm upon arrival at the site due to ambient moisture; the following interlocks required insertion of 5-mm Hydrotite:

<u>Interlock Nos.</u>	<u>Hydrotite Length Inserted (ins.)</u>
79-80	32
127-128	14
128-129	113
131-132	32
134-135	79
190-191	46
196-197	18
228-229	15
238-239	5
292-293	67

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Level D for all site activities.
- o All emissions measured at background levels.
- o Workers are to walk around perimeter of site to avoid knee injuries due to mud.

4.0 QA/QC

- o Pete Porter out until Thursday January 16, 1992; Valery Petrenko is on-site to take his place.
- o Canonie is still having trouble getting complete specification submittal from NSC; one was received on Friday January 17, 1992; Pete Porter is evaluating these specifications while away from the site and will be FAXing his comments to the site with regards to this latest submittal.

5.0 Miscellaneous and Old Business

- o No flooding has been observed at property on Gotham Parkway directly across Peach Island Creek from the site.
- o Pat Evangelista of the EPA has not received approval from Wilson Associates to use the parking lot along Gotham Parkway.
- o Canonie asked what decontamination procedure should be used if Canonie decides to lower a probe of some sort into the pumping wells to determine if they are clear and provide enough tolerance for installation of the submersible pumps; Gerry Coscia of Langan stated that decontamination procedure in Operations and Maintenance Plan was sufficient for what is intended and that probing should be performed in a sequence of least contaminated well to most highly contaminated.

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Letter regarding the southern deflected section of the sheetpile wall was received by Langan and is being evaluated.
- o EPA had not received a copy of Addendum 1 to Modification Number 12 regarding the replacement of monitoring wells MW-1S and MW-6S.
- o Canonie requested a sketch of the gates which Langan is requesting the fencing subcontractor to install; Mark Seel of Langan will provide Canonie with this sketch.
- o Langan has received copies of the modification requests regarding the utilization of the staging area crushed stone for anchor trench backfill and additional Gundwall anchors.

cc: Progress Meeting Attendees per Attachment #1
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

REVISION 2 - FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from January 7, 1992 progress meeting and meeting minutes from January 14, 1992 progress meeting were distributed to the attendees; Gerry Coscia of Langan provided his edits to the January 7, 1992 minutes via telephone on Monday January 20, 1992 and these were incorporated into the final minutes for the January 7, 1992 progress meeting; the attendees requested that the week of January 20, 1992 be given for further review of the January 14, 1992 minutes since they were received late by some of the attendees.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Gundwall sheets cut approximately even with ground surface; continued removal of crushed stone from staging area PVC membrane on Monday January 13, 1992.
 2. Gundle completed their demobilization activities; graded site where possible with D68 dozer in anticipation of freezing conditions on Tuesday January 14, 1992.
 3. Drillers on-site to start raising and repairs of the wells and piezometers; surveyors on-site to complete as-built survey of Gundwall alignment; started driving H-piles along deflected areas of sheetpile wall on Wednesday January 15, 1992.
 4. Drillers continued raising and repairs of the wells and piezometers; continued driving H-piles along the deflected areas of sheetpile wall on Thursday January 16, 1992.
 5. Completed driving of the H-piles along the deflected areas of the sheetpile wall; demobilized the pile hammer and compressor; drillers completed raising and repairs of wells and piezometers on Friday January 17, 1992.

REVISION 2 - FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Installed new construction fence around staging area on Saturday January 18, 1992.
 7. Graded adjacent to the slurry wall so that capping with geotextile and soil cover can be initiated; started decontaminating crane on Monday January 20, 1992.
- o Work scheduled for this week includes:
1. Continue decontaminating crane.
 2. Place geotextile and soil cap over geotextile.
 3. Back-drag site with dozer for drainage purposes.
 4. Drillers will return to site to install replacement wells.

3.0 Health and Safety

- o Background levels measured in breathing zone.
- o 20% LEL at MW-4S and 15ppm VOCs encountered at MW-2S during well repairs and raising; no "burning" work performed at these locations; wells allowed to aerate until VOC levels dissipated; drillers performed work in level D since background levels were encountered in the breathing zone.
- o Level C utilized along Peach Island Creek during miscellaneous grading work today due to dust and 4 to 6ppm unsustained VOC levels.
- o No offsite monitoring performed yet today since perimeter monitoring levels are at background.

4.0 QA/QC

- o Loader tire accidentally entered slurry wall trench at sta. 11+40; Gundwall liner was not damaged.

100906

Canonie

REVISION 2 - FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie is completing their QA/QC package with regards to the Gundwall and Hydrotite; this package will be finalized and made available this week.
- o Canonie has received and approved the final submittal information from NSC; Canonie will send this information to Langan for forwarding to the EPA.

5.0 Miscellaneous and Old Business

- o Canonie has issued a letter to Langan with regards to piezometer P-9 and is awaiting a response.
- o Mark Seel of Langan noticed a track print in the slurry wall trench at Sta. 7+90; Canonie will investigate the situation with Mark Seel tomorrow (Wednesday January 22, 1992).
- o Mark Seel of Langan requested a copy of the invoice for the H-piles utilized at the deflected sheetpile areas; Canonie will provide this invoice as soon as it is prepared by the manufacturer.
- o ICF Kaiser representative stated that a letter has been prepared by the EPA regarding the accidental entry by the operating engineer with the CAT 235 into the staging area on Friday January 17, 1992; the CAT 235 entered directly from the exclusion zone without decontamination; entry of Gundle personnel onto the staging area directly from the exclusion zone is also going to be addressed by the EPA letter; these entries were performed without authorization by Canonie; the ICF Kaiser representative also stated that Pat Evangelista feels that EPA has been extremely co-operative throughout this project and he is upset by these incidents.
- o ICF Kaiser will confer with EPA to see whether they will require a New Jersey licensed well driller to install the well boxes.

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from January 14, 1992 and January 21, 1992 progress meetings were distributed to the attendees and edits were requested; the edits to the January 14, 1992 minutes will be incorporated; Canonie would like to go over some of the edits requested for the January 21, 1992 at the February 4, 1992 progress meeting prior to issuing the final minutes for this meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Started grading adjacent to the slurry wall to achieve a surface suitable for placement of geotextile and soil cap; started decontamination of crane on Monday January 20, 1992.
 2. Started construction of geotextile and soil slurry wall cap at northeast corner of site and continued southwards; continued decontamination of crane; performed general site upkeep in staging area on Tuesday January 21, 1992.
 3. Placed a truckload of stone over decontamination pad; continued construction of geotextile and soil slurry wall cap; continued decontamination of crane on Wednesday January 22, 1992.
 4. Completed construction of geotextile and soil slurry wall cap; compacted cap material with loader bucket and feathered cap to blend with adjacent grades; continued decontamination of crane on Thursday January 23, 1992.
 5. Drillers mobilized for installation of MW-1SR, MW-6SR and P-9R; completed decontamination of crane; started decontamination of welder; completed anchor trench section between staging area entrance and southwest corner on Friday January 24, 1992.

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Realigned anchor trench along sheetpile wall; maintained drainage swale; continued site grading where possible; completed decontamination of welder; installed MW-1SR, MW-6SR and P-9R on Monday January 27, 1992.
- o Work scheduled for this week includes:
 1. Abandon MW-1S, MW-6S and P-9;
 2. Break-down crane for demobilization;
 3. Continue on-going site grading when and where possible;
 4. Decontaminate drill rig;
 5. Continue equipment decontamination.
 - o Due to the poor subgrade conditions present at this time, Canonie stated that they are planning to demobilize temporarily and will return to install the infiltration barrier at a later date when subgrade conditions become suitable; Joseph Mihm of Canonie's King of Prussia office will submit a letter of notification on this subject by Friday January 31, 1992.

3.0 Health and Safety

- o Levels C and D were utilized during grading; unsustained levels of 1ppm above background were encountered in the breathing zone.
- o Anchor trench excavation was performed in level D.
- o Drilling work was performed in level C until placement of filter pack was started at MW-1SR and throughout all work at MW-6SR and P-9; background levels were encountered in the breathing zone at MW-1SR; unsustained levels of up to 100ppm above background were encountered at top of augers after cap was removed at MW-6SR; unsustained levels of up to 6ppm above background were encountered at P-9R; some VOCs were encountered at both monitoring well locations.

FINAL WEEKLY PROGRESS MEETING MINUTES
JANUARY 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Geotextile utilized for slurry wall cap was overlapped between 2 to 4 feet wherever ends of adjacent rolls were placed; 6 to 12 inches of cover material was placed over geotextile and compacted with on-site loader bucket; grading of the slurry wall cap will continue as conditions allow.
- o The replacements for monitoring wells MW-1S and MW-6S, and piezometer P-9 are named MW-1SR, MW-6SR and P-9R on the permits; construction details will be prepared by Canonie for these replacements; Canonie will have to place permit and well numbers on replacement casings.

5.0 Miscellaneous and Old Business

- o Langan requested the original QA/QC data concerning plumbness for the sheetpile wall, well modification data and Gundwall continuity data; Canonie provided a submittal package containing all other Gundwall QA/QC data to Mark Seel of Langan the previous week.
- o ICF Kaiser has not been provided with a response by EPA on whether a licensed New Jersey well driller will be required to install the well boxes.
- o Langan asked Canonie when the temporary demobilization would occur; Canonie replied that it may be completed the week of February 3, 1992; Canonie may leave some equipment; Canonie plans to install silt fence along Peach Island Creek prior to the temporary demobilization; a letter outlining the proposed temporary demobilization will be provided to Langan by Canonie by EOD Friday January 31, 1992.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Frank Gontowski - Canonie
Joseph E. Mihm - Canonie
Peter F. Porter - Canonie
Jim Semple - Canonie

100910

Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 4, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minutes from January 14, 1992 and January 28, 1992 progress meetings were distributed to the attendees; edits were requested to the January 28, 1992 minutes; the edits to the January 28, 1992 minutes will be incorporated; edits to the January 21, 1992 minutes were reviewed and revised.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Realigned anchor trench along sheetpile wall; regraded drainage swale where needed; graded site where possible with dozer; decontaminated welder; installed MW-1S, MW-6S and P-9R on Monday January 27, 1992.
 2. Drillers added surface grout to MW-1S and MW-6S; started decontamination of drill rig; performed grading around slurry pond; started decontamination of CAT 235 on Tuesday January 28, 1992.
 3. Continued decontamination of CAT 235; completed decontamination of drill rig; drillers left site at approximately 9:00 A.M.; cut and capped miscellaneous pipes listed in Modification 12 on Wednesday January 29, 1992.
 4. Continued decontamination of CAT 235; started breaking-down the crane and demobilized boom; crane body is still on-site; maintained fencing around perimeter of staging area on Thursday January 30, 1992.
 5. Completed decontamination of CAT 235; picked-up and bagged loose debris from around staging area and placed into PPE dumpster; started decontamination of loader on Friday January 31, 1992.
 6. Repaired staging area perimeter fence which was damaged by wind during the previous weekend;

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 4, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

re-covered geotextile and geomembrane stored on staging area with plastic; received 10,340 gallon dewatering storage tank and containment dike on Monday February 3, 1992.

- o Work scheduled for this week includes:
 1. Complete decontamination of loader.
 2. Decontaminate Gundwall sheets left on-site.
 3. Install temporary fence at northeast corner of site.
 4. Install silt fence along sheetpile wall and east side of staging area.
 5. Demobilize crane body, CAT 235 and loader.

3.0 Health and Safety

- o Surficial grouting of wells, and cutting and capping of pipes performed in level D; background levels encountered in the breathing zone during this work;
- o All other work in exclusion zone also performed in level D.

4.0 QA/QC

- o Steve Pierce was introduced as Pete Porter's replacement as QA/QC engineer and will be responsible for assembling outstanding QA/QC submittals.
- o Pete Porter of Canonie submitted the H-pile invoice to Mark Seel of Langan to verify sections and lengths utilized by Canonie.
- o Canonie will issue as-built information as it becomes available.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 4, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Canonie will provide the fluid level conversion sheet and as-built drawing provided by manufacturer for dewatering tank; some minor alterations to the 10,340 gallon dewatering tank were noted upon its arrival; these alterations will not impact the performance of the tank.
- o EPA has not indicated whether licensed well drillers will be required for the installation of the well boxes.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Joseph E. Mihm - Canonie
Jim Semple - Canonie

FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 11, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final minutes from January 21, 1992 and minutes from February 4, 1992 progress meetings were distributed to the attendees; minor edits were requested to the January 21, 1992 and February 4, 1992 minutes and will be incorporated; final meeting minutes from January 28, 1992 progress meeting were not distributed by mistake.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued decontamination of loader; received 10,000 gallon tank and dike; covered geomembrane and geotextile with plastic in accordance with manufacturer's requirements; repaired construction fencing around staging area damaged by high winds during the weekend; demobilized CAT D-4 on Monday February 3, 1992.
 2. Demobilized crane; decontamination of loader completed; erected fencing at northeast corner of site on Tuesday February 4, 1992.
 3. Decontaminated Gundwall sheets left on-site; erected silt fence along Peach Island Creek where needed; demobilized CAT 235 on Wednesday February 5, 1992.
 4. Placed 10,000 gallon tank in dike which was positioned on staging area; erected silt fence along east side of staging area; received sand bags for infiltration barrier; continued decontaminating Gundwall sheets left on-site; placed hay bales at drainage notches along sheetpile wall on Thursday February 6, 1992.
 5. Completed erection of silt fence along east side of staging area; demobilized loader; placed miscellaneous PPE in roll-off; EDI representative stamped well/piezometer and permit numbers on casings; remaining union labor laid-off; secured remaining materials and equipment for shut-down on Friday February 7, 1992.

FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 11, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie is instituting a temporary shut-down due to the subgrade conditions which do not meet the requirements of the IRRDR.

3.0 Health and Safety

- o Level D utilized for most activities; level C utilized for minor grading activities on Thursday February 13, 1992; unsustained emission levels of 1/2 to 1 ppm above background were encountered during this grading work.

4.0 QA/QC

- o QA/QC data packages for sheetpile wall, Gundwall and well modifications still need to be distributed by Canonie.
- o As-built drawing and water level-to-volume conversion chart for 10,000 gallon dewatering storage tank were distributed.

5.0 Miscellaneous and Old Business

- o EPA's verbal rejection of modification number 22 was re-stated by ICF Kaiser representatives; Canonie stated that Mark Seel of Langan had informed us of this verbal rejection late afternoon on Friday February 7, 1992; Canonie management is awaiting a written response on modification number 22 in order to assess what actions should be taken.
- o Canonie asked ICF Kaiser whether EPA had decided on whether a licensed New Jersey well driller was required for installing the well boxes; ICF Kaiser representatives stated that EPA has not responded to this topic.
- o ICF Kaiser representatives re-stated the verbal directive from Pat Evangelista to Don Murphy at the February 3, 1992 meeting, requiring that the staging area stone which came in contact with the CAT 235 which entered the staging area directly from the exclusion zone, can be removed and placed in the exclusion zone; EPA will issue a letter regarding this topic.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 25, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o No meeting minutes were distributed at this progress meeting; revised final meeting minutes for January 21, 1992, final meeting minutes for January 28, 1992 and February 4, 1992 and meeting minutes for February 11, 1992 are still outstanding.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Canonie planned to collect samples from subgrade soils for moisture/density testing by Woodward-Clyde on Thursday February 20, 1992; sampling not performed due to requirement for an approved modification request for this work.
 2. PRP group had representatives from Geo-Con, CODE and Conti perform a site walk on Friday February 21, 1992.
 3. Canonie performed miscellaneous field surveying throughout the week.
 4. Canonie performing investigative grading on Tuesday February 25, 1992;
 5. Canonie will continue the investigative grading throughout the week.
- o ICF Kaiser requested that Canonie provide copies of the groundwater table elevations; ICF Kaiser will have to request this information through Langan, from Joseph Mihm of Canonie.

3.0 Health and Safety

- o Curt DeWolf is currently acting as the SSO.
- o No air emissions above background levels were encountered during the previous week; dozer performing work in levels C and D; level C was not required, but was utilized by choice.

100916

Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
FEBRUARY 25, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Pete Porter is preparing edits to the outstanding QA/QC data; this data will be transmitted to Langan as it becomes available.

5.0 Miscellaneous and Old Business

- o Canonie asked ICF Kaiser whether EPA had decided on whether a licensed New Jersey well driller was required for installing the well boxes; ICF Kaiser representatives stated that EPA has not provided a response to this topic.
- o Canonie asked whether EPA had provided comment on modification number 23; ICF Kaiser said a reply letter should be available Wednesday February 26, 1992 or Thursday February 27, 1992.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

100917

Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 3, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Final Progress Meeting Minutes for January 21, 1992, Weekly Progress Meeting Minutes for January 28, 1992 and Final Weekly Progress Meeting Minutes for February 4, 1992 were reviewed and minor edits were requested; Weekly Progress Meeting Minutes for February 11, 1992 and February 25, 1992 will be reviewed at the March 10, 1992 progress meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Canonie shot top-of-inner-casing elevations for wells and piezometers; water levels in shallow wells and piezometers were recorded on Monday February 24, 1992.
 2. Dozer was utilized to perform grading for the purpose of investigating site conditions; this effort was discontinued due to saturated site conditions on Tuesday February 25, 1992.
 3. Site meeting was held between representatives from Langan, Canonie, PRP Group (Exxon), ICF Kaiser, National Seal and EPA; Canonie performed a site grading demonstration for the meeting attendees on Wednesday February 26, 1992.
 4. Started measuring the sheetpile deflections; completed up to sheet #231; Placed D-68 dozer on decontamination pad, cleaned out cab on Thursday February 27, 1992.
 5. Recorded water levels in MW-5S, MW-6S, MW-7S and P-14; received smooth drum roller; repaired back-up alarm on D-68 dozer while on decontamination pad; completed sheetpile deflection measurements on Friday February 28, 1992.
 6. Relocated 10,000 gallon dewatering storage tank and containment dike to their permanent location outside the northern entrance gate; performed some successful grading on southwest side of site, just

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 3, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

south of staging area; attempted to re-grade the area disturbed during site demonstration on Wednesday February 26, 1992; received CAT 426 rubber tired back-hoe on Monday March 2, 1992.

- o Work scheduled for this week includes:
 - 1. Perform site grading in areas where conditions allow;
 - 2. Continued removal of staging area stone from over staging area PVC membrane;
 - 3. Stone removed from over staging area PVC membrane will be stockpiled on plastic sheeting outside of north entrance gate.
 - 4. A submersible pump may be placed down MW-6S to be utilized if temporary dewatering is required.

3.0 Health and Safety

- o Curt DeWolf is the acting SSO.
- o Grading work on Tuesday February 25, 1992 was started in level C and downgraded to level D.
- o Grading demonstration for site meeting on Wednesday February 26, 1992 was performed in level D.
- o Surveying, sheetpile wall deflection measuring, dozer repairs and grading at southwest area of site on Monday March 2, 1992 were performed in level D.
- o Regrading of demonstration area was performed in level C; background emissions were at 0.8ppm, with sustained levels of 0.5ppm above background and unsustained levels of 0.8ppm above background for less than 5 seconds.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 3, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Water levels and sheetpile deflections were recorded as stated earlier.
- o Langan requested measured casing stick-up heights for the wells and piezometers; Canonie will also be issuing a listing of repairs, modifications and replacements of wells and piezometers.
- o QA/QC data requested by Langan will be issued this week by Canonie.

5.0 Miscellaneous and Old Business

- o EPA has not issued any comment on whether a liscensed well driller is required to set the well boxes.
- o Modification Number 23 is still outstanding; Canonie will probably not request any notice on this modification.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 10, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Weekly Progress Meeting Minutes for February 11, 1992, February 25, 1992 and March 3, 1992, Revision 2 - Final Weekly Progress Meeting Minutes for January 21, 1992, Final Weekly Progress Meeting Minutes for January 28, 1992 and Revised Final Weekly Progress Meeting Minutes for February 4, 1992 were reviewed; minor edits were requested for the February 11, 1992, February 25, 1992 and March 3, 1992 minutes.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Relocated 10,000 gallon dewatering storage tank and dike to permanent location outside of north entrance gate; attempted to grade site and made some progress south of the staging area; attempted to grade the area where the February 26, 1992 dozer demonstration was performed; mobilized the CAT 426 backhoe on Monday March 2, 1992.
 2. Poor subgrade conditions prevented grading from being performed in exclusion zone; continued removal of crushed stone from over the staging area PVC membrane; crushed stone was stockpiled in support zone in front of the north entrance gate on Tuesday March 3, 1992.
 3. Poor subgrade conditions continued to prevent grading from being performed in exclusion zone; continued removal of crushed stone from over the staging area PVC membrane; crushed stone was stockpiled in support zone in front of the north entrance gate on Wednesday March 4, 1992.
 4. Started grading in exclusion zone by placing site material in an easterly direction over decommissioned sections of staging areas; graded stockpiled site material on east side of staging area to promote drainage; graded site between MW-5S and MW-6S in an attempt to fill low spots inside of slurry wall; erected construction fence along north side of staging area on Thursday March 5, 1992.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 10, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. Graded material north of staging area; graded material towards MW-2S and MW-6S; started rolling area south of the staging area and at northeast side of the site on Friday March 6, 1992.
 6. No grading was performed in the exclusion zone due to heavy rain on Saturday March 7, 1992; continued removal of crushed stone from over the staging area PVC membrane; crushed stone was stockpiled in support zone in front of the north entrance gate; recorded water levels in shallow wells and piezometers on Monday March 9, 1992.
- o Work scheduled for this week includes:
1. Attempt grading the southern end of site and continue east towards the PCB sludge pile.
 2. Attempt to fill in the voids between MW-6S and the PCB sludge pile.
 3. Attempt to grade areas around the slurry pond to improve drainage.

3.0 Health and Safety

- o Grading along area south of staging area was performed in level D; grading work north of slurry pond (in demonstration area) was performed in level C; background emission levels in this area were approximately 0.8ppm, with constant readings of 0.5ppm above background and unsustained peaks of 0.8ppm above background.
- o All removal of crushed stone from staging area was performed in street clothes, steel toed boots and hard hats.
- o All grading on Thursday March 5, 1992 was performed in level D with the exception of grading just north of P-14; this work was performed in level C, with background emissions of 0.6ppm, constant emissions of 1.2ppm and unsustained peak levels of 1.8ppm.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
MARCH 10, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o All grading and rolling performed on Friday March 6, 1992 was performed in level D.

4.0 QA/QC

- o Tables with Gundwall embedment depths, Gundwall sheets requiring 5mm Hydrotite inserts, 5mm Hydrotite swelling test results, well and piezometer modifications and construction details, and Hydrotite swelling calculations were provided to Langan on Friday March 6, 1992.
- o Langan requested a written statement from Canonie verifying the integrity of the Gundwall interlocks, as per the QAPjP.
- o Langan also requested the top of slurry wall and Gundwall elevations; Canonie stated that these are being assembled and should be obtained through Joe Mihm.
- o Langan would also like data regarding the sheetpile lengths, stick-up heights and stations; Canonie thought that these had already been transmitted, but will check to see if they were; this data will be transmitted to Langan either way.

5.0 Miscellaneous and Old Business

- o EPA has not issued any comment on whether a licensed well driller is required to set the well boxes.
- o The "kink" at the top of piezometer P-5 requires assessment by ICF Kaiser; Langan has already assessed the condition of P-5.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEP
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
MARCH 20, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final Weekly Progress Meeting Minutes for February 11, 1992, February 25, 1992 and March 3, 1992, and Weekly Progress Meeting Minutes for March 10, 1992 were reviewed; minor edits were requested for all but the February 11, 1992 minutes.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. No work in the exclusion zone was performed due to poor subgrade conditions caused by rain during previous weekend; continued removing crushed stone from over the staging area PVC membrane; recorded the water levels in the shallow wells and piezometers on Monday March 9, 1992.
 2. Continued grading where possible in the exclusion zone; worked on filling low areas on south side of site; site material previously placed over the sludge pile to help control emissions was utilized for filling in low areas along the east side between MW-6SR and sludge pile; continued removing crushed stone from over the staging area PVC membrane on Tuesday March 10, 1992.
 3. No work in the exclusion zone was performed due to poor subgrade conditions caused by rain during previous evening; continued removing crushed stone from over the staging area PVC membrane on Tuesday March 11, 1992.
 4. Continued removing crushed stone from over the staging area PVC membrane; graded area north and west of slurry pond; also graded area around MW-2S on Thursday March 12, 1992.
 5. Continued grading area north and west of slurry pond, as well as area north and east of slurry pond, to promote further drying of this material; continued removing crushed stone from over the staging area PVC membrane on Friday March 13, 1992.

100924

WEEKLY PROGRESS MEETING MINUTES
MARCH 20, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Continued grading at northwest corner and along north side of site; also continued grading area east of sludge pile utilizing site material previously placed over the north end of the sludge pile to help control emissions; graded outer edges of the slurry pond on Monday March 16, 1992.
 7. Rolled frosted areas north, east and west of the slurry pond; continued removing crushed stone from over the staging area PVC membrane on Tuesday March 17, 1992.
- o Work for the upcoming week will be controlled by weather conditions encountered.
 - o Work scheduled for this week includes:
 1. Continuing site grading and rolling as weather permits.
 2. Bring CAT 426 into exclusion zone as conditions permit to perform the following:
 - o Initiate well box installation;
 - o Remove debris from the anchor trench and drainage swale;
 - o Grade top and east side of sludge pile;
 - o Attempt to bury large debris in the slurry pond;
 - o Initiate repair of P-5;
 - o Perform grading in tight areas where dozer can't access.
 - o Don Boublis will start initial phases of dewatering system installation not requiring entry into the exclusion zone.

100925

Canonie

WEEKLY PROGRESS MEETING MINUTES
MARCH 20, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o All removal of crushed stone from over staging area PVC membrane performed in street clothes, steel-toed boots and hard hats.
- o Grading performed in the exclusion zone on Tuesday March 10, 1992 performed in level D, with the exception of the removal of fill material from the northern edge of the sludge pile; this work was performed in level C even though no emission levels were encountered above background levels, which were at 0.5ppm.
- o All work performed in the exclusion zone on Thursday March 12, 1992 was performed in level D, with the exception of grading performed northwest of the slurry pond, where level C protection was utilized; background emission levels in this area were at 0.6ppm with unsustained peaks of 0.6ppm above background.
- o All grading performed in the exclusion zone on Friday March 13, 1992 was performed in level D, with the exception of the area north of P-2, where level C protection was utilized; background emissions in this area were at 0.6ppm, with unsustained peaks of up to 2.4ppm above background.
- o All work performed in the exclusion zone on Monday March 16, 1992 was performed in level D, with the exception of grading performed around MW-3S and the sludge pile, where level C protection was utilized; background emissions of 0.6ppm, with unsustained peaks of up to 1.2 to 1.6ppm were encountered in area around MW-3S; no emissions above background levels of 0.6ppm were encountered during work at the sludge pile.

4.0 QA/QC

- o Canonie still needs to provide Langan with the sheetpile wall QA/QC data obtained during the initial installation.

WEEKLY PROGRESS MEETING MINUTES
MARCH 20, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Canonie has been provided with permission by EPA to install the well boxes without the presence of a New Jersey licensed well driller.
- o Verbal approval was provided by EPA allowing Canonie to initiate temporary dewatering when required.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

100927

Canonie Environmental

WEEKLY PROGRESS MEETING MINUTES
MARCH 24, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Final Weekly Progress Meeting Minutes for March 25, 1992 and March 3, 1992, Final Weekly Progress Meeting Minutes for March 10, 1992 and Weekly Progress Meeting Minutes for March 20, 1992 were distributed; edits were requested for the March 10, 1992 minutes; the March 20, 1992 minutes will be reviewed at the March 31, 1992 progress meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Performed grading at west corner and north side of site, as well as around the former slurry pond; filled in depressions east of sludge pile utilizing site material previously placed over sludge pile on Monday March 16, 1992.
 2. Rolled areas north, east and west of the former slurry pond; this work was made possible due to the presence of frost and may require additional effort following repeal of the frost; continued removing crushed stone from over the PVC membrane covering the staging area; dewatering subcontractor completed electrical connections and preparation of the dewatering storage tank for temporary dewatering operation from MW-6S; dewatering subcontractor also delivered submersible pump, relays and other appurtenances required for temporary dewatering on Tuesday March 17, 1992.
 3. Site material placed over areas of the staging area where crushed stone removal was completed; started fine grading of sludge pile along north, east and south sides on Wednesday March 18, 1992.
 4. Snow encountered at site; no work performed in field on Thursday March 19, 1992.
 5. Performed monitoring of groundwater levels in piezometers and shallow wells; approximately six inches of snow at site from previous day's storm; no other work performed infield on Friday March 20, 1992.

WEEKLY PROGRESS MEETING MINUTES
MARCH 24, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Additional snow present at site from storm on Sunday March 22, 1992; no work performed in the Exclusion Zone; continued removing crushed stone from over the PVC membrane covering the staging area on Monday March 23, 1992.
- o Work scheduled for this week includes:
 1. Continue removing crushed stone from over the PVC membrane covering the staging area.
 2. Continue set-up of temporary dewatering system; this work includes:
 - o Placing submersible pump in MW-6S;
 - o Completing electrical connections between pump, sensors, relay box and breaker;
 - o Connect garden hose being utilized as a discharge line to the dewatering storage tank;
 - o Installing temporary fencing around dewatering storage tank and containment dike assembly.

3.0 Health and Safety

- o Level D PPE utilized in Exclusion Zone during grading performed on Monday March 16, 1992, with the exception of grading east of MW-3S; background emissions at 0.6ppm; unsustained peaks of up to 1.4ppm above background encountered east of MW-3S; constant readings of 0.3 to 0.4ppm above background were encountered in Exclusion Zone; level C PPE also utilized during removal of site material previously placed over sludge pile; no emissions above background encountered while performing this work.
- o All work in Exclusion Zone performed in level D on Tuesday March 17, 1992.

WEEKLY PROGRESS MEETING MINUTES
MARCH 24, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o All work in Exclusion Zone on Wednesday March 18, 1992 was performed in level D, with the exception of fine grading performed on sludge pile; level C PPE utilized in this area; background emissions of 0.7ppm encountered in the Exclusion Zone, with constant emissions of 0.3ppm above background; unsustained peaks of 0.5 to 1.5ppm above background encountered during work at sludge pile.
- o Removal of crushed stone from PVC membrane over staging area performed in street clothes, steel-toed boots and hard hats.
- o Curt DeWolf is continuing as the SSO.

4.0 QA/QC

- o Canonie still needs to provide Langan with the sheetpile wall QA/QC data obtained during the initial installation.
- o No activities requiring QA/QC review were performed.

5.0 Miscellaneous and Old Business

- o Canonie should prepare an advisory notice outlining the repair procedure to be utilized for piezometer P-5; this work will be performed under the "blanket" approval granted for Modification Number 12; Canonie should provide NJDEPE with a minimum one day notice prior to initiating repair of P-5; this work can not be performed until the site conditions improve to the point where the CAT 426 can access the site.
- o Morris Elkins of ICF Kaiser stated that he informed Pat Evangelista of EPA that work in the Exclusion Zone can not be performed due to the snow cover; Morris provided Pat Evangelista with this information on Monday March 23, 1992; approximately six inches covered the site on Thursday March 19, 1992 and approximately three inches covered the site on Monday March 23, 1992.

WEEKLY PROGRESS MEETING MINUTES
MARCH 31, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Final Weekly Progress Meeting Minutes for March 10, 1992 and Weekly Progress Meeting Minutes for March 20, 1992 and March 24, 1992 were distributed; edits were requested for the March 20, 1992 and March 24, 1992 minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Approximately 2 to 3 inch snow cover prevented any work from being performed in the Exclusion Zone; continued removal of crushed stone from over PVC membrane covering staging area subgrade on Monday March 23, 1992.
 2. Continued removal of crushed stone from over PVC membrane covering staging area subgrade; started installing rain shields on containment dike for dewatering storage tank; placed submersible pump in MW-6S to initiate temporary dewatering; started hauling crushed stone removed from staging area off-site on Tuesday March 24, 1992.
 3. Continued removal of crushed stone from over PVC membrane covering staging area; continued hauling crushed stone removed from staging area off-site; continued installing rain shields on containment dike for dewatering storage tank; connected submersible pump in MW-6S to hose line and dewatering storage tank on Wednesday March 25, 1992.
 4. Repaired construction fencing around remaining staging area; continued removal of crushed stone from over PVC membrane covering staging area; continued hauling crushed stone removed from staging area off-site; CAT D3 mobilized to site on Thursday March 26, 1992.
 5. Cleared space on staging area for cherry picker to work next week; continued removal of crushed stone from over PVC membrane covering staging area; CAT 950 delivered to site on Friday March 27, 1992.

WEEKLY PROGRESS MEETING MINUTES
MARCH 31, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

6. Cherry picker utilized to relocate HDPE and geotextile to Exclusion Zone from staging area; plastic sheeting placed beneath HDPE and geotextile rolls; utilized CAT 950 to help continue with hauling crushed stone removed from staging area off-site; installed temporary fence around dewatering storage tank; initiated temporary dewatering from MW-6SR; groundwater pumped from this well is being pumped to the 10,000 gallon dewatering storage tank; placed missing plug into bottom of dewatering storage tank; utilized sump pump to remove water which escaped into containment dike due to missing plug in storage tank on Monday March 30, 1992.
- o Temporary dewatering was initiated on Monday March 30, 1992 and continued through Thursday April 2, 1992.
 - o Work scheduled for this week includes:
 1. Repair decontamination pad fencing;
 2. Repair construction fencing around staging area;
 3. Demobilized cherry picker;
 4. Relocate sand bags into Exclusion Zone and place on plastic sheeting;
 5. Continue pumping from MW-6S;
 6. Continue recording groundwater elevations;
 7. Continue removal of crushed stone from PVC membrane covering the staging area subgrade.
 8. Perform grading if weather permits.
 - o The water which escaped into the containment dike from the dewatering storage tank was caused by the omission of a plug along the underside of the tank; the plug was subsequently screwed into position and the water in the containment dike was placed into the tank utilizing a sump pump.

100932

WEEKLY PROGRESS MEETING MINUTES
MARCH 31, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Placement of submersible pump in MW-6S was performed in level D; no emissions detected above background levels, which were at 0.6ppm.
- o Workers in Exclusion Zone involved with relocating of HDPE and geotextile utilized level D PPE.
- o All activities in staging area and support zone were performed in street clothes, steel-toed boots and hard hats.
- o The following emissions were recorded during the measurement of groundwater elevations: 1) background level of 0.4ppm and constant levels of 0.8ppm above background at MW-4S; 2) background level of 0.4ppm and constant levels of 1.6ppm above background at MW-3S; level C PPE utilized at these locations.
- o Emissions at remaining shallow monitoring wells at background levels and level D PPE was utilized.
- o Background emissions of 0.6ppm recorded during pumping of water from containment dike to dewatering storage tank with constant level of 1.0ppm above background; respirators utilized while working in the area of the tank and dike; no contact was made with the contaminated groundwater.

4.0 QA/QC

- o Canonie still needs to provide Langan with the sheetpile wall QA/QC data obtained during the initial installation.
- o No activities requiring QA/QC review were performed.

WEEKLY PROGRESS MEETING MINUTES
MARCH 31, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Canonie is preparing a modification regarding the installation of additional ballast for the infiltration barrier and the method of covering and fastening the tarp/liner for the T-5 roll-off; the additional ballast will consist of water-filled HDPE tubes.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
APRIL 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final Weekly Progress Meeting Minutes for March 20, 1992 and March 24, 1992, and Weekly Progress Meeting Minutes for March 31, 1992 were distributed; edits were requested for the March 31, 1992 minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. No grading performed in Exclusion Zone due to wet site conditions; relocated HDPE and geotextile to plastic sheeting and HDPE liner placed in Exclusion Zone; continued off-site hauling of crushed stone removed from Staging Area; started temporary dewatering from MW-6SR (approximately 815 gallons pumped into the holding tank; this included melt water within the containment dike); installed temporary fencing around the 10,000 gallon dewatering tank on Monday March 30, 1992.
 2. No grading performed in Exclusion Zone due to wet site conditions; repaired Staging Area fence damaged by wind; demobilized cherry picker utilized for relocating the geotextile and geomembrane; continued off-site hauling of crushed stone removed from Staging Area; relocated sand bags from Staging Area to plastic sheeting placed in Exclusion Zone; continued temporary dewatering from MW-6SR (approximately 1,177 gallons pumped) on Tuesday March 31, 1992.
 3. No grading performed in Exclusion Zone due to wet site conditions; continued removing crushed stone from over Staging Area PVC membrane and stockpiling outside north entrance gate; prepared location just north of south entrance gates for relocation of PPE roll-off; continued temporary dewatering from MW-6SR (approximately 896 gallons pumped) on Wednesday April 1, 1992.
 4. No grading performed in Exclusion Zone due to wet site conditions; relocated PPE roll-off outside

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
APRIL 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

perimeter fence; installed temporary fence around PPE roll-off; continued removing crushed stone from over Staging Area PVC membrane and stockpiling outside north entrance gate; continued temporary dewatering from MW-6SR (approximately 954 gallons pumped) on Thursday April 2, 1992.

5. Performed grading of the former slurry pond area; this area requires a large degree of additional effort; also graded puddled areas to enhance drying; relieved water from tarp on T-5 roll-off and moved drums and overpacks away to east side of slab on Friday April 3, 1992.
 6. Continued stabilizing and grading former slurry pond area; graded northeast of Staging Area to fill depressed areas; also graded areas east of MW-6SR and P-14, and along northeast side of site; buried excess Gundwall sheets just north of equipment decontamination pad; started installation of well boxes on Monday April 6, 1992.
- o No temporary dewatering performed from MW-6SR after April 2, 1992 since static water levels had been sufficiently decreased; water levels will be monitored to determine whether temporary dewatering needs to be initiated once again.
 - o Work scheduled for this week includes:
 1. Continue stabilization and grading of slurry pond.
 2. Continue well box installation.
 3. Roll subgrade where possible.
 4. Start removing debris from drainage swale and anchor trench.
 5. Continue hauling crushed stone from Staging Area off-site.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
APRIL 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o All work performed in the Exclusion Zone from Monday March 30, 1992 through Thursday April 2, 1992 was performed in modified level D; work in the Support Zone during this period was performed in street clothes, steel-toed boots and hard hats.
- o Groundwater levels measured using level C PPE.
- o Grading of slurry pond on Friday April 3, 1992 was performed using modified level D PPE; background emission levels were approximately 0.3ppm.
- o PPE level during work in slurry pond on Monday April 6, 1992 was upgraded to level C; background emission level of 0.7ppm was encountered with constant emissions of 0.5ppm above background and unsustained peaks of 0.9ppm above background.
- o PPE utilized during installation of well box at MW-1SR was upgraded to level C; level C PPE was utilized at MW-6SR, 3S and 2S; background emissions at MW-3S at 0.8ppm with unsustained peaks of up to 2.4ppm above background; background emissions at MW-6SR at 0.7ppm with unsustained peaks of 0.5 to 0.7ppm.
- o Modified level D PPE utilized for the installation of the well box at MW-5S; background emissions at 0.8ppm.

4.0 QA/QC

- o Canonie has prepared the sheetpile QA/QC data and will provide to Langan with a transmittal letter today.
- o No activities requiring QA/QC review were performed.

REVISED FINAL WEEKLY PROGRESS MEETING MINUTES
APRIL 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Well boxes should be installed by the end of this week.
- o Canonie stated that they are planning to place water-filled ballast tubes in drainage swale since debris in anchor trench is extensive and may compromise the uplift capacity of the infiltration barrier; Langan and ICF Kaiser concurred with this decision and also concurred that the 28"W x 14"H dimensions of the ballast tubes, when filled, should not impede the flow capacity of the swales.

cc: Progress Meeting Attendees per Attachment #1

Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
APRIL 15, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final Weekly Progress Meeting Minutes for March 31, 1992 and Weekly Progress Meeting Minutes for April 7, 1992 were distributed; minor edits were requested for the April 7, 1992 minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued grading of former slurry pond area; graded northeast of staging area in order to help eliminate low areas; improved overall grading east of MW-6SR and P-14; buried excess Gundwall sheets north of the equipment decontamination line; also improved grades east of staging area and west of former slurry pond; started installation of well boxes on Monday April 6, 1992.
 2. Continued grading of former slurry pond; improved grading north of the equipment decontamination pad; continued with installation of well boxes on Tuesday April 7, 1992.
 3. Completed installation of well boxes on Wednesday April 8, 1992.
 4. Started cleaning debris from drainage swale and anchor trench which may be particularly detrimental to infiltration barrier installation; improved grades of swales at northeast end of site on Thursday April 9, 1992.
 5. continued grading of former slurry pond area; started removing small equipment and materials from the staging area; continued grading of former slurry pond utilizing hand labor; started removal of protruding steel from site surface utilizing a demolition saw on Friday April 10, 1992.
 6. Completed cleaning of debris from drainage swale and anchor trench; Canonie personnel performed as-built surveying; registered New Jersey well

WEEKLY PROGRESS MEETING MINUTES
APRIL 15, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

driller on-site to supervise the repair of piezometer P-5; continued grading of former slurry pond area; installed flashing around required piezometers so that HDPE boots can be attached; obtained permission from Carolina Freight to use their parking lot during backfilling of the anchor trench and installation of the perimeter fence on Monday April 13, 1992.

7. Graded the sludge pile using the CAT 426 and hand labor; the sludge pile was not excavated into during this work; continued ongoing removal of surface debris around the site; rolled north half of the site; NSC crew mobilized to site and spotted geotextile rolls and prepared sand bags on Tuesday April 14, 1992.
- o Work scheduled for this week includes:
 1. Continue grading the south half of the site;
 2. Continue construction of the infiltration barrier;
 3. Continue removing the crushed stone from over the staging area PVC membrane.

3.0 Health and Safety

- o Tom Balis is the acting SSO and either he or Rachelle Polley will be present as the SSO next week;
- o All grading on the former slurry pond area was performed in level C PPE;
- o Installation of the well boxes was performed in level C and D PPE;
- o Grading of the sludge pile was performed in level C PPE;
- o All other grading work was performed in level D PPE;

APRIL 15, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Removal of debris from the anchor trench and swale was performed in level D PPE.
- o No vinyl chloride was detected during the previous week;
- o No sustained emissions requiring level C PPE were encountered;
- o Site specific health and safety training was provided for the NSC crew by Canonie as they arrived at the site on Monday, Tuesday and Wednesday of this week;
- o Release of Claims forms were also signed by NSC crew upon their arrivals to the site.

4.0 QA/QC

- o pH and hardness data for municipal water utilized for slurry wall requested by Langan; Canonie stated they obtained this information during the design phase from Hackensack Water and will try to find the information for Langan.
- o Freezer testing of the sample water-filled ballast tube was completed by Canonie; ballast tube was left in freezer for approximately 29 hours and showed no defects after freezing or the subsequent thawing.

5.0 Miscellaneous and Old Business

- o Canonie and Langan requested that ICF Kaiser find what the status of Modifications 25 and 26 are; no information regarding these modifications has been released.
- o Langan found approximately 1/2 to 1 inch of oily sludge present in MW-3S following investigation on Friday April 3, 1992 by Langan.

SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie requested that progress meetings be moved to 5:00 P.M. on Tuesdays during infiltration barrier installation in order to allow their personnel to attend to the field operations; attendees did not have any objections to this, however, ICF Kaiser will contact EPA to obtain their opinion on this.
- o Langan requested that the next progress meeting be moved Wednesday April 22, 1992 at 5:00 P.M.; this date and time were agreed to by the attendees.
- o Canonie will be working on Saturdays and possibly Sundays where the weather and work schedules are conducive.
- o Canonie will be obtaining a water wagon to control the dust created by the dry site conditions and construction traffic.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
APRIL 27, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Final Weekly Progress Meeting Minutes for April 7, 1992 and Weekly Progress Meeting Minutes for April 22, 1992 were distributed; no edits were requested for for either of the minutes distributed.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Rain during the previous weekend caused the postponment of infiltration barrier construction; continued removal of crushed stone from over the staging area PVC membrane; decontaminated H-beams; reconnected electrical service to MW-6SR on Monday April 20, 1992.
 2. Ongoing rain and drizzle, and the resulting poor site conditions, caused the postponment of infiltration barrier construction until Monday April 27, 1992; continued removal of crushed stone from over the staging area PVC membrane; decontaminated temporary fencing utilized around the decontamination pad; re-started temporary dewatering from MW-6SR on Tuesday April 21, 1992.
 3. Continued removal of crushed stone from over the staging area PVC membrane; part of the crushed stone stockpile outside north gate hauled off-site; pole for dewatering system electrical components received; covered T-5 roll-off with tarp on Wednesday April 22, 1992.
 4. Continued removal of crushed stone from over the staging area PVC membrane;

WEEKLY PROGRESS MEETING MINUTES
APRIL 27, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. No infiltration barrier construction performed due to wet site conditions; continued removal of crushed stone from over the staging area PVC membrane; decontaminated temporary fence from around the decontamination pad; re-initiated temporary dewatering from MW-6SR on Tuesday April 21, 1992.
- o Work scheduled for this week includes:
 1. Continue with removal and hauling of crushed stone from over the staging area PVC membrane.
 2. Start preliminary decontamination of the D68 in order to expedite final decontamination.
 3. Continue temporary dewatering from MW-6SR.
 4. Due to wet condition of the site and the poor weather forecasts for the remainder of the week, infiltration barrier construction will not continue until Monday April 27, 1992.

3.0 Health and Safety

- o Cleaning of the anchor trench and swale performed in level D PPE.
- o Grading of the former slurry pond was performed in level C PPE; background emissions at approximately 0.8ppm with unsustained peaks of 0.2ppm above background.
- o Grading of the sludge pile was performed in level C PPE; background emissions at approximately 0.8ppm with unsustained peaks of 1.4ppm.
- o Deployment of the geotextile was performed in level D PPE.
- o Contouring of the swale was performed in level D PPE.

WEEKLY PROGRESS MEETING MINUTES
APRIL 27, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Groundwater table measurements were taken on Friday April 17, 1992; groundwater table was found to have risen slightly due to recent rains and is the reason Canonie has re-started temporary dewatering.
- o Canonie provided NSC with an overview of the QA/QC procedures to be utilized during the construction of the infiltration barrier.
- o Jeff Baldyga will be Canonie's QA Engineer during the infiltration barrier construction.

5.0 Miscellaneous and Old Business

- o Canonie will place the permanent tarp over the T-5 roll-off and place sand bags around the perimeter; tarp is being placed to cover the existing tarp, which was punctured to allow drainage of ponded water.
- o Langan requested specifications for the Polyfelt TS500 geotextile.
- o Additional gates will be constructed in accordance with a sketch prepared by Mark Seel of Langan and dated 1/14/92; these gates are being added to facilitated post-construction activities at the site; Canonie will provide an advisory letter regarding these gates; Canonie provided an overview of the different types of slats which are being considered for the perimeter fence; Canonie will provide samples of the various types of slats and quotes for each type; the utilization of the slats will also require an advisory notice; Canonie can not allow direct billing of the slats and additional gates to Langan since it violates our contract and our general liability insurance for the site.

WEEKLY PROGRESS MEETING MINUTES
APRIL 27, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Canonie would also like to alter the fencing layout around the dewatering holding tank and utilize the existing fence behind the tank; this will also require slight alterations to the inlet piping for the tank; Canonie will prepare a modification proposal for this.
- o ICF Kaiser informed Canonie that verbal approval of Modification Numbers 25 and 27; ICF Kaiser also stated that EPA is requiring additional information to approve Modification Number 26, however, ICF Kaiser will need to clarify what type of additional information is being required by EPA.
- o Canonie stated that several of their subcontractors had informed them that they were contacted by individuals other than Canonie personnel and required information which was in conflict of their contracts with Canonie; Canonie requested that all parties maintain the proper lines of communications between the construction and oversight parties.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

FINAL REVISED WEEKLY PROGRESS MEETING MINUTES
APRIL 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Final Weekly Progress Meeting Minutes for April 7, 1992 and Weekly Progress Meeting Minutes for April 22, 1992 were distributed; no edits were requested for either of the minutes distributed.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Rain during the previous weekend caused the postponement of infiltration barrier construction; continued removal of crushed stone from over the staging area PVC membrane; decontaminated H-beams; reconnected electrical service to MW-6SR on Monday April 20, 1992.
 2. Ongoing rain and drizzle, and the resulting poor site conditions, caused the postponement of infiltration barrier construction until Monday April 27, 1992; continued removal of crushed stone from over the staging area PVC membrane; decontaminated temporary fencing utilized around the decontamination pad; re-started temporary dewatering from MW-6SR on Tuesday April 21, 1992.
 3. Continued removal of crushed stone from over the staging area PVC membrane; part of the crushed stone stockpile outside north gate hauled off-site; pole for dewatering system electrical components received; covered T-5 roll-off with tarp on Wednesday April 22, 1992.
 4. Continued removal of crushed stone from over the staging area PVC membrane; decontaminated the belly pan on the D68; remainder of the ballast snakes were delivered to the site; placed flashing around base of piezometers P-6 and P-11; pumped residual water from containment dike to the 10,000 gallon dewatering tank using a small ditch pump supplied by Langan on Thursday April 23, 1992.

FINAL REVISED WEEKLY PROGRESS MEETING MINUTES
APRIL 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. Replaced the belly pan back on the D68 following decontamination; decontaminated miscellaneous items; consolidated miscellaneous items for burying along east side of the staging area in order to be covered during grading; continued ongoing collection of as-built survey data; placed roll of geotextile against south side of T-5 roll-off to secure tarp due to high winds; continued removal of crushed stone from over the staging area PVC membrane on Friday April 24, 1992.
6. Started placement of HDPE; cleaned slope material from swale at north end which had collapsed from side slopes; started placing ballast tubes in swale at north end of site; cut holes in perimeter fence at north end of site to allow for placement of anchor trench stone along north side on Monday April 27, 1992.

o Work scheduled for this week includes:

1. Move personnel decontamination line to north main gate.
2. Continue construction of infiltration barrier.
3. Continue placement of anchor trench backfill.
4. Continue removal of crushed stone from over the staging area PVC membrane.
5. Police will be utilized to control traffic during transfer of crushed stone from the stockpile at the north gate to the perimeter of the north side of the site.
6. Continue required grading and rolling.
7. Continue grading of the staging area.

FINAL REVISED WEEKLY PROGRESS MEETING MINUTES
APRIL 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Level D utilized in the exclusion zone for all work.
- o Set-up 24 hour training for fencing crew supervisor.

4.0 QA/QC

- o Field destructive testing indicates FTB, which passes the QA/QC criteria; Canonie is performing membrane testing more stringent than that required by the QAPP.
- o Field destructive tests in puddled area where seaming was performed were performed and conformed to the QAPP.
- o Overviewed the methodology Canonie is utilizing for the HDPE membrane QA/QC with Mark Seel; items overviewed including tensiometer grip spacing and FTB criteria.
- o Sled is being utilized by NSC during seaming to isolate mouse from any subgrade moisture.
- o Jeff Baldyga is now the on-site QA engineer for Canonie.

5.0 Miscellaneous and Old Business

- o Canonie is awaiting slat samples from fencing contractor.
- o Advisory notice will be prepared by Canonie regarding the additional gates and the selected slat system.
- o Canonie questioned whether DuPont is prepared for the initiation of groundwater trucking; Langan responded that DuPont was ready and that Canonie should consider hauling an initial trial load to DuPont in order assure no problems will be encountered once full-scale hauling starts; Canonie and Langan need to devise a method for coordinating manifesting for the groundwater hauling.

FINAL REVISED WEEKLY PROGRESS MEETING MINUTES
APRIL 28, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Langan is waiting for a statement of interlock continuity from Canonie; Canonie will supply this statement.
- o ICF Kaiser stated that Canonie needs to remove the oil booms from Peach Island Creek near Gotham Parkway; Canonie stated that they were aware of these oil booms and will be removing them during the upcoming week.
- o Canonie has informed their guards that they need to check the areas of the north perimeter fence where holes were cut and wired back together.
- o ICF Kaiser requested that EPA be notified in writing if the May 22 completion date indicated on the latest progress schedule will not be met.
- o ICF Kaiser questioned whether the as-built surveying was being performed by a licensed surveyor; Canonie stated that the survey data being collected presently is for Canonie's informational purposes and that the IRRDR does not require the utilization of a licensed New Jersey surveyor ; a final site topographic survey will be prepared at the completion of the project.
- o Canonie requested that site personnel do not step on apparent sharp objects situated below the infiltration barrier.
- o Canonie will be send the modification regarding the proposed fencing layout around the 10,000 gallon dewatering tank this week.
- o Canonie was asked whether there was adequate material on-site to grade the staging area adequately to promote drainage; Canonie stated that the supply of on-site material was indeed tight but that drainage would be established.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

100950

Canonie *Environments*

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 5, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Weekly Progress Meeting Minutes for April 28, 1992 were distributed; minor edits were requested and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Placed approximately 25,000 SF of HDPE; pressure tested approximately 2350 LF of seam; started placing and filling water-filled ballast tubes; backfilled anchor trench at north end of site with staging area scum on Tuesday April 28, 1992.
 2. Relocated personnel decontamination line to north main gate; re-installed flashing around piezometers P-6 and P-11; continued placing and filling water-filled ballast tubes; demobilized CAT 950; started grading of decommissioned sections of the staging area; continued backfilling of the anchor trench in the northwest corner of the site; placed approximately 27,000 SF of HDPE heading south of the former slurry pond area on Wednesday April 29, 1992.
 3. Continued grading decommissioned sections of staging area; continued placing and filling water-filled ballast tubes; started backfilling the anchor trench along Peach Island Creek; relocated NSC equipment trailer to outside north main gate; placed HDPE along west side of site, from northwest corner to north main gate; removed outer tarp from T-5 roll-off and removed a discarded tarp and debris, placed at the base of the T-5 roll-off, and replaced outer tarp; continued placement of geotextile to the west and south of the former slurry pond on Thursday April 30, 1992.
 4. Continued placement of geotextile and HDPE around the T-5 roll-off and south of the former slurry

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 5, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

pond; continued grading decommissioned sections of the staging area; continued placing and filling water-filled ballast tubes; relocated fuel tank outside the perimeter fence at the south entrance gate; continued backfilling anchor trench along west side of site along north end; Bergen County workers removed oil booms from Peach Island Creek which were most likely left over from construction operations along the creek at the industrial park; Canonic confiscated these booms in case they had been utilized by Canonic; these booms were bagged and disposed of in the PPE roll-off on Friday May 1, 1992.

5. Moved geotextile rolls in order to facilitate continuing removal of crushed stone from over the staging area PVC membrane; continued grading decommissioned sections of the staging area; rolled graded areas of the staging area; continued placing and filling water-filled ballast tubes on Saturday May 2, 1992.
6. Continued deployment of geotextile over south end of site, including the PCB sludge pile; continued laying out and filling water-filled ballast tubes; graded over miscellaneous debris south of the staging area; continued backfilling of the anchor trench; decontaminated CAT 426 on Monday May 4, 1992.

o Work scheduled for this week includes:

1. Continue with placement of geotextile and HDPE;
2. Decontaminate equipment;
3. Remove remaining crushed stone over the staging area PVC membrane;
4. Continue backfilling the anchor trench;
5. Continue placing and filling of the water-filled ballast tubes;
6. Demobilize the decontamination trailer.

100952

Canonic Environmental

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 5, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Level D or modified level D utilized in the exclusion zone for all work.
- o No emissions were encountered above background levels during any site activities.

4.0 QA/QC

- o All QA/QC test results for the infiltration barrier installation meet or exceed the criteria of the IRRDR.
- o Vacuum box testing will be started as required during either the upcoming or following week.
- o Site personnel are not to examine the samples which Canonie is archiving without requesting permission from Jeff Baldyga since they may become separated from other samples they are to be stored with.
- o Canonie still needs to prepare a written statement for Langan concerning continuity of the Gundwall interlocks.

5.0 Miscellaneous and Old Business

- o Canonie's price quote for the various fencing slats will be forwarded to Langan as soon as the Canonie management approves the letter prepared by the field staff concerning this topic; Canonie is continuing to pursue additional options for materials which can be utilized to impede sight through the fencing.
- o Langan stated that DuPont is ready to receive the contaminated groundwater from the site; Canonie may haul an initial load to DuPont next week; this initial load will be utilized as a trial run.

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 5, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o ICF Kaiser will inquire with EPA regarding the status of Modification Number 28 and 29.
- o Canonie may switch to an alternate geotextile for cushioning of the infiltration barrier if the existing stock runs out; this may be required if the manufacturer does not have ample supply on-hand to complete the project in a timely manner; Canonie will prepare proper justification for any alternate type(s) of geotextile obtained.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 12, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final Weekly Progress Meeting Minutes for April 28, 1992 and Weekly Progress Meeting Minutes for May 5, 1992 were distributed; minor edits were requested and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Continued construction of the infiltration barrier at southeast corner and sludge pile areas; started final decontamination of the D68 dozer; continued removal of crushed stone from over the staging area PVC membrane; continued deployment and filling of the water-filled ballast tubes on Tuesday May 5, 1992.
 2. Completed the removal of crushed stone from over the staging area PVC membrane; continued construction of the infiltration barrier; exposed Gundwall sheets at south end of site where the loader had created a rut in the slurry wall; inspection of these Gundwall sheets revealed that the Gundwall sheets had not been damaged; continued decontamination of the D68 dozer; continued with backfilling of the anchor trench on Wednesday May 6, 1992.
 3. Continued construction of the infiltration barrier along the south side of the site; hauled 3 loads of crushed stone formerly utilized over staging area to Carolina Freight for backfilling the south and lower east side anchor trench; completed decontamination of the D68 dozer on Thursday May 7, 1992.
 4. Mobilized Bobcat; mobilized 5 additional rolls of geotextile; rolls of geotextile were the same as those utilized to-date at the site and conformed to the project specifications; NSC crew departed from the site at 10:00 A.M. due to rain and high

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 12, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

winds; disconnected utility service to the decontamination trailer; continued backfilling the anchor trench; decontaminated the roller; performed final servicing of the D68 dozer and demobilized; continued deploying and filling of water-filled ballast tubes on Friday May 8, 1992.

- o Hauled crushed stone removed from staging area to northeast and southeast corners of site for utilization as anchor trench backfill; Carlstadt police were utilized for traffic control during this work; continued backfilling anchor trench on south side of site; rain from previous day prohibited backfilling of the anchor trench along Peach Island Creek on Saturday May 9, 1992.
- o Mobilized 1-1/2 additional rolls of geomembrane; continued backfilling anchor trench along Peach Island Creek utilizing hand labor; continued construction of the infiltration barrier at southwest corner of site; buried mats utilized for equipment decontamination pad flush with the ground surface at this location; completed backfilling of the anchor trench along the south side of the site on Monday May 11, 1992.
- o Work scheduled for this week includes:
 1. Work on improving backfill grades along Peach Island Creek utilizing the Bobcat loader.
 2. Complete construction of the infiltration barrier.
 3. Complete final decontamination of the loader.
 4. Excavate the drainage swale at the south entrance.
 5. Start disconnecting utilities from the trailers in preparation for demobilization.
 6. Start erection of perimeter fencing.
 7. Demobilize office furniture on Thursday May 14, 1992.

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 12, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Level D or modified level D utilized in the exclusion zone for all work.

4.0 QA/QC

- o All QA/QC test results for the infiltration barrier installation meet or exceed the criteria of the IRRDR.
- o Statement of continuity for the Gundwall sheets has been prepared and is being reviewed by Canonie managers.
- o Canonie has obtained the Quality Assurance data for the rolls of geomembrane delivered to the site on Monday May 11, 1992; this information will be provided to Langan.

5.0 Miscellaneous and Old Business

- o Langan stated that they will not be requesting Canonie to place slats in the new perimeter fencing due to the lack of co-operation from the management of the neighboring industrial park; utilization of the slats may be reconsidered at a later date; Langan was recognized as having used more than reasonable effort in trying to resolve this issue.
- o Canonie is not planning to pump any groundwater from the 10,000 gallon storage tank this week; Canonie wants to have 2 full loads prepared for transport since the tank must be fully emptied in order to install dewatering system appurtenances; approximately 1-1/5 loads are in the tank at this time and Canonie would have to pay as much to haul the 1/5 load as a full load.
- o EPA has not provided any status update for Modifications 28 and 29; Canonie requires information regarding the status of Modification Number 29 in order to schedule NSC properly.

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 12, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o The rolls of geotextile delivered to the site on Friday May 8, 1992 were the same as those previously delivered and utilized for the cushioning of the infiltration barrier.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Final Revised Weekly Progress Meeting Minutes for April 28, 1992, Revised Weekly Progress Meeting Minutes for May 5, 1992 and Weekly Progress Meeting Minutes for May 12, 1992 were distributed; minor edits were requested for May 12, 1992 Minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Attempted to place backfill along exposed subgrade area along Peach Island Creek, however, this area was too soft to allow for utilization of the Bobcat; continued construction of the infiltration barrier; continued deployment and filling of the water-filled ballast tubes; decontaminated the roller on Tuesday May 12, 1992.
 2. Continued construction of the infiltration barrier; excavated swale at south entrance; backfilled the anchor trench along the west side of the site; started placement of additional fill over exposed subgrade area along Peach Island Creek utilizing the Bobcat; demobilized the roller; received verbal approval from EPA representatives for Modifications 28 and 29 on Wednesday May 13, 1992.
 3. NSC working on infiltration barrier detail work; hauled crushed stone removed from over staging area PVC membrane to northeast corner of the site to be utilized as anchor trench backfill; demobilized the office furniture; NFS started erection of fence posts at north and south side of the site; completed placement of additional backfill over northern 2/3's of the exposed subgrade area along Peach Island Creek; this work was performed utilizing the Bobcat on Thursday May 14, 1992.

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4. Demobilized decontamination trailer; pulled out lunch trailer in order to facilitate removal of the decontamination trailer; replaced the lunch trailer once the decontamination trailer was removed; fence posts were set along the north side; also drilled holes and set fence posts along the south side of site; completed placement of additional backfill over remainder of the exposed subgrade area along the Peach Island Creek side of the site; NSC installed HDPE erosion control sheet along northern 2/3's of Peach Island Creek side; demobilized the loader; disconnected utility service from the trailers; portable toilet was delivered on Friday May 15, 1992.
 5. NSC completed the installation of the HDPE erosion control sheet; all remaining infiltration barrier construction was completed; excavated trench at northeast and southeast corners to be utilized for anchorage at the ends of the HDPE erosion control sheet; this trench was also backfilled; completed all work on the anchor trench along the entrance gate; relocated leftover HDPE and geotextile between the two existing buildings; installed fence fabric along the north side of the site; continued deployment and filling of the water-filled ballast tubes on Monday May 18, 1992.
 6. Demobilized miscellaneous small equipment; demobilized the Canonie, Langan/EPA and lunch trailers; performed a general clean-up of the Support Zone; relocated the temporary fence in front of the Support Zone to provide additional working room for the erection of the permanent fence; mobilized the dumpster to utilized for the disposal of the fencing being removed; installed the fencing fabric for on the south side of the site on Tuesday May 19, 1992.
- o Work scheduled for this week includes:
1. Complete the perimeter fencing.

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

2. Start installation of the dewatering system.
 3. Perform a general clean-up of the site.
- o Langan asked why installation of the dewatering system had not been started over the previous 1-1/2 weeks; Canonie explained to them that there was legal precedent for having the piping to be installed by laborers and that Canonie wanted to have the laborers leave the site since we had contracted plumbers to perform the piping installation; Canonie also explained that they had attempted to have laborers perform welding of the type of pipe we are using here at other sites and found that experienced plumbers or pipe fitters perform this work much more competently; the laborers from this area do not have any experience with this work.

3.0 Health and Safety

- o Level D was utilized for all work.
- o Background emissions of 4 ppm, with unsustained peaks of 10 ppm above background was encountered inside one of the fence post holes being drilled near the center of the north side of the site; these emissions were encountered inside the hole; this hole was backfilled until placement of the pole was required; no emissions from any fence post holes were encountered in the breathing zone.

4.0 QA/QC

- o All QA/QC test results for the infiltration barrier installation meet or exceed the criteria of the IRRDR; all required test results have been completed; final copies of the test results will be forwarded to Langan upon their final inspection.

100961

REVISED WEEKLY PROGRESS MEETING MINUTES
MAY 21, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Statement of continuity for the Gundwall sheets has been prepared and is being reviewed by Canonie management; this should have already been forwarded to Langan in letter form; the Canonie representatives will check to see what the status of this letter is.

5.0 Miscellaneous and Old Business

- o Langan inquired as to when the installation of the dewatering system will begin and what the construction duration will be; Canonie answered that installation of the dewatering system will begin on Tuesday May 26, 1992 and the duration will be approximately 2 to 3 weeks.
- o Modification 31 has been forwarded to the EPA for review; Canonie may not be provided with approval before late next week; Canonie may continue with the present anchorage system if this situation occurs; Gerry Coscia of Langan also stated that he would like to be present during the installation of the initial drive-anchor posts in order to be sure that they are as stable as concrete anchored posts.
- o The next progress meeting will be Tuesday May 26, 1992 at 3:30 P.M.; EPA stated that more notice would be required in the future should any progress meetings require postponement or re-scheduling.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
MAY 26, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Weekly Progress Meeting Minutes for May 12, 1992 and Weekly Progress Meeting Minutes for May 21, 1992 were distributed; minor edits were requested for May 21, 1992 Minutes and will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Relocated un-used ballast tubes from area of south entrance gate to area between the existing buildings; cleaned former storage area adjacent to north entrance gate; started setting and drilling fence post holes along west side of site; reconnected utility service to Langan trailer; dressed-up crushed stone in front of north entrance gate; demobilized diesel fuel tank; demobilized the CAT 426 backhoe; raked areas from where trailers were removed; completed demobilization of Hi-Tech on Wednesday May 20, 1992.
 2. Started hanging fence fabric on west side of site; cleaned fence materials removed from south side of site and placed in dumpster; started removing existing fence material from west side of site on Thursday May 21, 1992.
 3. Continued hanging fence fabric on west side of site; continued removal and disposal of existing fence material on Friday May 22, 1992.
 4. Observance of Memorial Day holiday; no work performed on Monday May 25, 1992.
 5. Continue hanging fence fabric on west side of site and around the 10,000 gallon dewatering storage tank on Tuesday May 26, 1992.

WEEKLY PROGRESS MEETING MINUTES
MAY 26, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Work scheduled for this week includes:
 1. Re-start installation of the dewatering system.
 2. Continue installation of the perimeter fence.
 3. Start installation of the barbed wire.

3.0 Health and Safety

- o Level D was utilized for all work.

4.0 QA/QC

- o Certification letter from Canonie for the Gundwall interlock continuity was forwarded to Don Murphy of Langan; a copy was also provided to Langan at the progress meeting.
- o Canonie is completing the assembly of the infiltration QA data and will furnish this information to Langan by the end of this week.

5.0 Miscellaneous and Old Business

- o Canvas sample for the T-5 roll-off cover is being forwarded to Canonie; this canvas sample will be similar to the tarps utilized over roll-offs; Canonie will forward this sample to Langan upon receipt.
- o Canonie's dewatering installation subcontractor will be on site tomorrow (Wednesday May 27, 1992) to start work; no union problems are anticipated with this work.

WEEKLY PROGRESS MEETING MINUTES
MAY 26, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o ICF Kaiser representative asked when Canonie anticipated completion of the perimeter fencing; Canonie replied that they anticipated this work being completed during the middle of the upcoming week.
- o The next progress meeting will be held on Tuesday June 2, 1992 at 3:30 P.M.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 2, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Weekly Progress Meeting Minutes for May 21, 1992 and Revised Weekly Progress Meeting Minutes for May 26, 1992 were distributed; minor edits were requested for each and these will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Work continued on filling the ballast tubes with water and deploying them across the site. Work continued on installation of the new perimeter fence along the west side; work included tightening of the fence fabric and hanging the barbedwire on Wednesday May 27, 1992.
 2. The Bobcat was demobilized from the site. A gas powered hand auger for installing the fence posts along the Peach Island Creek side was brought on site. Holes were started along the creek for the fence posts. Work continued deploying the ballast tubes on Thursday May 28, 1992.
 3. Post holes were completed, concrete poured and fence posts set along the creek. The liner well casings of the shallow wells were surveyed and the elevations between the shallow wells along the pipe runs were measured to determine the proper location to tap into the 24 inch PVC casing and achieve proper slope of the piping to allow back draining when necessary. Closed up both ends of the fence on the south side of the site, near Carolina Freight. Continued deploying the ballast tubes on Friday May 29, 1992.

WEEKLY PROGRESS MEETING MINUTES
JUNE 2, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4. Work continued along the creek and included cutting the fence posts to the proper elevation, finishing the barbed wire supports, finishing the top rail, and spotting fence fabric. Don Boublis began dewatering system work by assembling electric boxes with breakers, relays, and motor starters. All of this took place in his shop on Monday June 1, 1992.
 5. Began installing fence fabric along the Peach Island Creek side of the site. Fence gates should be delivered today, with 2 for use along the creek side. Don Boublis was on site to pour the concrete slab for the electrical control box. Electric conduit to be delivered today for the dewatering system on Tuesday June 2, 1992.
- o Work scheduled for this week includes:
 1. Complete the perimeter fencing;
 2. Start installation of the dewatering system.

3.0 Health and Safety

- o Level D was utilized for all work.

4.0 QA/QC

- o All QA/QC test results for the infiltration barrier installation was submitted to Mark Seel of Langan; Pat Boyle of Canonie surveyed the top of casing for the seven on-site shallow wells.

5.0 Miscellaneous and Old Business

- o Modification 31 will be withdrawn as it is no longer needed.
- o Samples of the canvas material for the tank T-5 tarp have not arrived as of this date. The material is

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 2, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

similar to that covering the roll-off for the PPE. It was decided to leave the temporary cover on the tank when the canvas cover is put in place.

- o Some sand bags currently on top of the infiltration barrier do not meet the project specifications. At this time, the sand bags are temporary and for NSC use and will be collected and wasted prior to leaving the site. The blue bags of sand will remain for support of the double containment pipe and other uses.
- o The time required for installation of the dewatering system will be approximately 2 weeks. Pat Evangelista felt that more personnel should be present to finish the dewatering system before June 15, 1992. Pat said that the other work was done well but the dewatering system delays may bring a hard-line approach by the EPA.
- o A hole was noted north of the slurry pond in the flap covering part of the Peach Island Creek bank.
- o It was suggested to try to place an additional section of fence material along the creek so that it is level with the Gotham Parkway fence. Pat Evangelista would walk out at the end of the meeting and show where exactly this was needed.
- o Pat Evangelista felt that the miscellaneous clean up work could be started now.
- o Pat wants to have something done with the ponded area over by the former staging area. Pat feels that this is a significant ponded area and wants something done to correct it.
- o The EPA feels that a visual barrier is needed along Gotham Parkway. After the interim construction is completed, Langan would reply with a time frame for placing this barrier.
- o Pat will withhold from writing a letter on the dewatering schedule (Modification 30) until Canonie talks to their subcontractor on the extra manpower that will be needed.

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 2, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Curt DeWolf went over the modifications for the level switch and piping layout, the weather-proof junction box, the steel-braided heat tracing which would lie straight along the containment pipe, and the removal of the concrete protection posts from the front of the holding tank, and the relocation of the drain valves from MW-1S to MW-2S. Pat said to lump these modifications into a single request as this would be the easiest thing to do. He felt these changes were acceptable to him; he also felt the quick disconnects could be eliminated from inside each box.
- o The next progress meeting will be Tuesday June 9, 1992 at 3:30 P.M; EPA stated that more notice would be required in the future should any progress meetings require postponement or rescheduling.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
JUNE 9, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Weekly Progress Meeting Minutes for May 21, 1992 and Revised Weekly Progress Meeting Minutes for May 26, 1992 were approved and the Weekly Progress Meeting Minutes for June 2, 1992 were distributed; minor edits were requested for the June 2 minutes and these will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. Installation of the dewatering system continued with the mounting of the electrical sub-panel box, the running of conduit for each of the electrical runs, marking the proper location on the 24 inch well box walls where the double containment piping will enter, and sealing the inner well casing on each of the 7 shallow wells. National Fence cleaned up the old fence material and placed this in the rolloff box on Wednesday June 3, 1992.
 2. Continued laying out the electrical conduit and junction boxes for the dewatering system. Modified the fence line along the northeast side of the site. Gates were installed along the creek side of the site and a fence panel was erected between the sheetpile wall and the concrete along the northeast corner of the site. More barbed wire was installed; continued removal of the old fence material to the rolloff box. Received six additional 1/2 horsepower well pumps on Thursday June 4, 1992.
 3. Heavy rains started at the site around 10:30 AM and prohibited any on-site work for the day. Don Boublis assembled pre-fabricated equipment at his shop on Friday June 5, 1992. Work was planned for Saturday June 6, 1992 but rain and predicted poor weather prevented this from occurring.

WEEKLY PROGRESS MEETING MINUTES
JUNE 9, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4. Continued running conduit and junction boxes for the dewatering system. The double containment piping, couplings, and fittings arrived on-site; the sections of pipe were deployed along the planned installation lines. Tooling for fusing the pipes and personnel for providing instruction on their use will be on-site June 9. Security personnel were released from their responsibilities as of 8:00 AM on Monday June 9, 1992.
 5. Started passing wire from each of the recovery wells through the conduit to the sub-panel. The equipment required for fusing the double containment piping arrived and instruction was given to the installation crew by the vendor's personnel. More ballast tubes were deployed along the south and west swale.
- o Work scheduled for this week includes:
1. Complete installation of wiring to the sub-panel.
 2. Complete fusion of all double containment piping, installation of well pumps, and pressure testing of the 1 inch carrier line. More sand bags will be fabricated to support the piping.
 3. Taylor, Wiseman, Taylor will shoot elevation on the shallow wells and piezometers.
 4. Transport the contents in the 10000 gallon tank to Dupont's facility in Deepwater, New Jersey. Install a discharge line onto the dike tank.
 5. Initiate full time operation of the dewatering system.

100971

WEEKLY PROGRESS MEETING MINUTES
JUNE 9, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Level D was utilized for all work.
- o Sealing of the inner well casings was performed in modified level C indicating respirators were used by personnel. No readings above background were noted on the HNu after venting of the well casing was performed.

4.0 QA/QC

- o Langan indicated that all QA/QC data that they have requested to date has been received.

5.0 Miscellaneous and Old Business

- o Canonie will send to Langan a memo to retract Modification 31.
- o Curt DeWolf will order the canvas this week for covering the tank T-5.
- o Canonie will take care of the cutting of one of the sheetpile sections adjacent to the sludge pile.
- o Canonie will have National Fence install an extension piece of fence fabric on the south end creek side of the fence, located near the drainage swale.
- o Canonie will attempt to have Boublis Electric bring in a backhoe to dress up the area where the trailers used to be located and along the fence line on Paterson Plank Road adjacent to Langan's trailer.
- o National Seal will return to the site to adjust the boot around piezometer P-9.
- o Concerning the ponding area, the King of Prussia office is aware of this situation but site personnel have not been informed of their decision.

WEEKLY PROGRESS MEETING MINUTES
JUNE 9, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Langan is in the process of securing a subcontractor to install a visual barrier onto the fence along Gotham Parkway and expects installation of this barrier to begin on or after the week of June 22.
- o In regards to the EPA's date for completion of the dewatering system of June 15, 1992, the EPA suggests extending working hours to meet this deadline. Canonie intends to work Saturdays and Sundays if needed. Since the double containment pipe arrived on-site, it was mentioned that Boubli's Electric should have 6 or 7 employees on-site by June 10, 1992.
- o Langan will have the information needed for the manifest to be filled out for removing the contents of the 10000 gallon dike tank. This should be done by Thursday June 11, 1992 so that the material can be sent to Dupont's facility.
- o Warning signs will be installed on the new perimeter fence and placed at 50 foot centers.
- o The next progress meeting will be Tuesday June 16, 1992 at 3:30 P.M.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 16, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Minor edits were requested for the Revised Weekly Progress Meeting Minutes for June 2, 1992 and these will be incorporated. The Weekly Progress Meeting Minutes for June 9, 1992 were distributed; minor edits were requested for the June 9 minutes and these will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. National Fence Company returned to the site to complete a punch list of their work items. Work on the dewatering system continued with the wiring of the wells to the sub-station, fusing of the 1 inch carrier piping, and the fabricating and deployment of additional sand bags on Wednesday June 10, 1992.
 2. Continued fabrication of the sand bags and welding of the 1 inch carrier lines. Brackets were welded onto the dike tank wall for the 3 inch discharge line and conduit for the tank control switch and heaters. The well boxes were drilled for the containment piping inlets. The first load of collected ground water was sent to Dupont's Deepwater Facility using S/J Transportation; total volume was 5900 gallons. Began assembling NEMA4 boxes for inside the well heads on Thursday June 11, 1992.
 3. Began installing spiders (spacer/supports) on the 1 inch carrier lines. Pressure tested the 1 inch carrier lines with 100 psig air from 7:37 AM to 9:37 AM; the lines passed the test with no loss in air pressure. Began installing the 3 inch containment line over the 1 inch line and fusing these together with the 3 inch electrofusion couplings. Continued assembling NEMA4 boxes for inside the well heads, continued electrical connections at the sub-panel, and continued

100974

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 16, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

fabrication and deployment of sand bags. Continued general site cleanup. Taylor, Wiseman, Taylor was on-site to shoot elevations on the innercasings of the shallow wells, the deep wells, and the piezometers on Friday June 12, 1992.

4. Continued installing double containment piping, making electrical connections. A second sub panel was mounted for the individual breakers and the main breaker. Began assembling the fittings for each well pump including the discharge line, on/off switches, the back drain valves, and the clamps and cable for the pump support. The inner well casings were drilled for electrical ground and for the pump support cable. Continued general site clean up and filling and deployment of ballast tubes. Began to tie in the 10000 gallon holding tank to the 3 inch containment line. Deployed more sand bags and adjusted these for proper pitch of the containment line on Saturday June 13, 1992.
5. The 1 inch carrier line was blown out with compressed air to clean it of debris; this will be done again prior to final tie-in of line. Continued electrical work tying lines into sub-panel, continued fusion of 3 inch containment piping, installed the well pumps and their accessories into wells MW-1S, MW-2S, MW-3S, MW-4S, MW-5S. Coated the pumps and probes with corn oil prior to placing into MW-3S in the attempt to avoid fouling of the probes on Sunday June 14, 1992.
6. Ran a temporary drop to provide electrical power to the dewatering system; continued other electrical connections to the sub-panel. Removed the pump from MW-6S and reinstalled with the permanent equipment per the design. Found and ordered additional material required for completion of the dewatering system on Monday June 15, 1992.
7. All well pumps in after installation of pump in MW-7S. Pressure tested any additional 1 inch line and these sections also passed. Began assembly of the last piping leg to the holding tank. Tested

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 16, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

the circuits and motor starter; all came on-line. The T fittings for the shutoff valve and the flowmeter sensor were installed next to the 10000 gallon holding tank on Tuesday June 16, 1992.

- o Work scheduled for this week includes:
 1. Starting tomorrow, June 17, 1992, all remaining materials for the dewatering system. will be on site, will be installed, and the dewatering will start.
 2. Fabricate more sand bags and adjust the pitch of the double containment lines.
 3. Begin installation of the heat tracing, insulation, and tank heaters.

3.0 Health and Safety

- o Level D was utilized for all work with the exception of the drilling of the inner well casings, the placement of the well pumps, and the installation of the piping from the transition plug on the 10000 gallon holding tank to the rest of the piping system. These activities were performed in modified Level C which meant all personnel near the work area used respirators.

4.0 QA/QC

- o Langan indicated that they are satisfied with all QA/QC data that they have requested.
- o Air pressure testing of the 1 inch carrier line was performed this past week. The line pressure was raised to 100 psig using air and held there for 2 hours. There was no loss in air pressure after the 2 hour period. This test was repeated and the results were similar.

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 16, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o The receipt of the back drain valves will be delayed but these will be installed when they do arrive. All other hardware at each recovery well is now in place.
- o Langan asked if the manifest for the ground water sent off-site has been returned. As of this date, it has not been returned to the site.
- o The modification request letter for the minor modifications to the dewatering system is being prepared by Joe Mihm. Joe Mihm is also preparing an advisory notice explaining the use of air pressure only, and not air and water, to test the 1 inch carrier line for leaks.
- o Langan requested status on the issue of the large puddled area. The EPA expects this area to become a priority item once the dewatering system is on-line.
- o Langan asked ICF about the sampling. ICF indicated that they expected to hear something about it later today. ICF stated that Pat Evangelista wants split samples. Langan indicated that they would like to continue the sampling tomorrow, Wednesday June 17, 1992.
- o Canonie will order a tarp to cover the rolloff box and delivery should be approximately one week.
- o Visual barriers will be installed after the sampling is completed. This will be handled by Langan.
- o Dress up of the stone along the fence line along Paterson Plank Road will be addressed next week.
- o Langan asked the EPA if they will put in a modification to the design report for split sampling. At this time, ICF is unsure and will advise as to any modification if they are needed.
- o Canonie will get back to ICF as to when National Seal Company will be back again on-site.
- o The next progress meeting will be Tuesday June 23, 1992 at 3:30 P.M.

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 23, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o The Revised Weekly Progress Meeting Minutes for June 2, 1992 and June 9, 1992 were accepted. The Weekly Progress Meeting Minutes for June 16, 1992 were distributed; there were minor edits requested.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 - 1. Piping across the site was tied into the 10000 gallon holding tank. The shut-off valve and flow meter sensor were installed as was the high level shut-off in the tank and was tested manually and shown to operate effectively. The 1 inch carrier line was blown out with air to remove debris. Piping connections at the well heads were made. Dewatering system was operated while personnel were on-site on Wednesday June 17, 1992.
 - 2. Work continued on pumps in MW-2S, MW-4S, and MW-6SR to uncross probe wires, make adjustments to get proper operation. Each pump was operated individually to monitor cycle patterns on Thursday June 18, 1992.
 - 3. Poor weather prohibited any work from being performed on-site Friday June 19, 1992.
 - 4. One of the 3 inch fusion couplings was discovered to have not welded between recovery wells MW-2S and MW-4S. The plumber with Don Boublis Contracting made the necessary repairs and extended both the 1 and 3 inch lines. The 1 inch carrier line was air tested after the repair and no leaks were measured. The pole for the permanent electric drop for power to the dewatering system was put in place. A backhoe was used to dress up the stone along Paterson Plank Road. The pitch of the piping across the site was adjusted to assist draining. More ballast tubes were deployed and filled. At the end of the day,

100978

Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 23, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

Curt DeWolf and Jerry Manesca witnessed the proper operation of the high level shut off switch in the holding tank as it shut off the power to the pumps when the high level was reached on Monday June 22, 1992.

5. Began installation of the conduit, electric box, and the meter housing for the permanent power drop. Two truck loads of recovered ground water were shipped from the site. The total volume was 8900 gallons. Contents in the containment dike were also placed into the trucks. Deployed and filled the last of the ballast tubes. Temporary sand bags were wasted in the anchor trench. Ground water sampling was resumed by Langan with the EPA present on Tuesday June 23, 1992.

o Work scheduled for this week includes:

1. PSE&G should drop power to system on Friday.
2. Complete site cleanup.
3. Electrical work will include finishing the conduit runs at the holding tank, installing level switches in the dike, install the flowmeter, and receive the heat tracing and insulation materials.
4. Convert the black iron fittings in the well box to stainless steel.
5. Deploy more sand bags under the double containment pipe.
6. Tarp for tank T-5 should arrive on Tuesday.
7. The Liner Company is scheduled for Wednesday of this week for repair of the boot around P-9 and miscellaneous pin holes.

3.0 Health and Safety

- o Level D was utilized for all work with the exception of any work at each of the well heads. This was performed by Curt DeWolf in modified Level C (use of respirator).

4.0 QA/QC

- o Langan needs to be issued the results of the pressure tests of the 1 inch carrier piping.

100979

Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 23, 1992
SCP CARLSTADT SUPERFUND SITE
90-198
(Continued)

5.0 Miscellaneous and Old Business

- o Back drain valves for three of the recovery wells should arrive in 3-4 weeks.
- o Letter on minor modifications, Modification Request 34, on the dewatering system from Joe Mihm has been sent to Langan on June 23, 1992.
- o Discussion was held over Canonie's plans to deal with the depressed area near the southwest corner of the site.
- o EPA & ICF Kaiser representatives observed gaps below the fence along Peach Island Creek near the south side. Canonie will put some additional barbed wire at the southeast corner of the site per Pat Evangelista's request.
- o EPA requested a set of keys for access to the site from Langan.
- o Langan asked if the EPA will be scheduling a walk through and then sign off on the construction completed. Pat Evangelista will look into this and if the EPA has to, it will do the walk when Langan/Canonie feels everything is complete.
- o Langan asked if the progress meeting needs to continue after next week. Langan will advise the EPA when any additional work will be performed in advance. It was decided that next week will be the last progress meeting.
- o One of the ballast tubes has a hole in its side and needs to be repaired or replaced. The Liner Company will do extrusion welds on the ballast tube in the northeast corner of the site and then will be refilled.
- o Langan will evaluate the liquid around the fence post which was observed by the EPA and ICF on the creek side. The liquid was black with a septic smell.

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 23, 1992
SCP CARLSTADT SUPERFUND SITE
90-198
(Continued)

- o Pat will advise on the perimeter signs along the fence and Canonie will not install these until further notice.
- o The next progress meeting will be Tuesday June 30, 1992 at 3:30 P.M.

cc: Meeting attendees noted on Attachment 1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

100981

Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 30, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Weekly Progress Meeting Minutes for June 23, 1992 were not available in time for this meeting and will be sent to all parties for comments prior to the final site progress meeting on July 7, 1992.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. General clean up of the site was completed and wasting of the temporary sand bags in the anchor trench. All generated trash and debris was hauled off site. Electrical connections in the breaker box and contactor box for anticipated inspection on Wednesday June 24, 1992.
 2. Replaced the black steel fittings in the well heads with stainless steel fittings. Ran conduit for the tank controls and heaters. Modified the tank vent to spill over into the dike and installed a blow back line on the tank for the truck hauler's vacuum pump on Thursday June 25, 1992.
 3. S/J Transportation was on site; loaded out 5000 gallons of recovered ground water to Dupont's facility. Installed a high level shut off in the dike. Continued running conduit for the tank controls and heaters on Friday June 26, 1992.
 4. Replaced the pump in recovery well MW-7S in an attempt to trouble shoot the cause for its lack of operation; this activity will continue tomorrow. S/J was on-site and shipped 5000 gallons of recovered ground water to Dupont's facility on Monday June 29, 1992.
 5. S/J was on-site and shipped 4550 gallons of recovered ground water to Dupont's facility. Installed the flowmeter on the holding tank. Continued working on MW-7S; found several problems

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 30, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

prohibiting operation of pump on Tuesday June 30, 1992.

- o Work scheduled for this week includes:
 1. Tarp for the T-5 rolloff will be delivered on-site Wednesday and will be installed.
 2. Heat tracing and insulation to be delivered and installed. Tank heaters are to arrive on-site July 2, 1992.
 3. Continue work to get MW-7S working.
 4. Continue scheduling trucks for the removal of recovered ground water.
 5. Continue working on IT to move PPE rolloff box off-site.
 6. Dumpster of trash to be hauled off-site by end of next week.
 7. The Liner Company will be on-site next week. They will repair the miscellaneous punctures in the infiltration barrier and fusion weld one ballast tube located in the northeast corner of the site.
 8. Barbed wire to be installed under and on top of the southeast corner of the perimeter fence.

3.0 Health and Safety

- o All work on-site was performed in Level D. The well head work was performed solely by Curt DeWolf in modified Level C with a respirator
- o Loading of the trucks with the recovered ground water was performed in Level D while air monitoring with an HNu took place. Levels recorded at no time exceeded background readings. Unit was calibrated daily prior to use with isobutylene.

100983

REVISED WEEKLY PROGRESS MEETING MINUTES
JUNE 30, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

4.0 QA/QC

- o Langan commented that they have not yet received the air pressure test data of the 1 inch carrier line.
- o Modification 34 was received by Langan and forwarded to the EPA.

5.0 Miscellaneous and Old Business

- o An advisory notice is necessary for the air pressure test of the 1 inch carrier lines.
- o Back drain valves for three of the recovery wells are still on back order. A firmer date for their delivery was requested.
- o Mark Seel and Curt DeWolf will do final walk around to inspect the site cleanup. Morris Elkins (ICF) would like to be included during the inspection.
- o Langan has reviewed Canonie's intentions for the low spot and Langan feels a remedy is not needed. Don Murphy will speak to Pat Evangelista about this on July 1, 1992.
- o A discussion was held about the dark water found around one of the fence posts along Peach Island Creek. Don Murphy will speak to Pat Evangelista about this on July 1, 1992.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Joseph E. Mihm - Canonie
Jim Semple - Canonie

REVISED WEEKLY PROGRESS MEETING MINUTES
JULY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Weekly Progress Meeting Minutes for June 23, 1992 and June 30, 1992 were distributed; minor edits were requested for each and these will be incorporated. Minor edits were also requested of the Revised Weekly Progress Meeting Minutes of June 16, 1992 and these will be incorporated and distributed with a re-issue of the Attachment of attendees at the next Weekly Progress Meeting.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. S/J Transportation removed 5700 gallons of recovered ground water off-site. Boublis Contracting completed hook-up of the flow meter, solved the operation problem with well MW-7S, and the heat tracing material arrived on-site. The new tarp was installed on the T-5 rolloff over the existing one on Wednesday July 1, 1992.
 2. S/J Transportation removed 5900 gallons of recovered ground water off-site. Installation began on the heat tracing of the 3 inch containment piping on Thursday July 2, 1992.
 3. No work performed on-site due to holiday on Friday July 3, 1992.
 4. S/J Transportation removed 5300 gallons of recovered ground water off-site. Installation of the heat tracing continued and began installation of the pipe insulation over the heat tracing on Monday July 6, 1992.
 5. S/J Transportation removed 5500 gallons of recovered ground water off-site. Installation continued for the heat tracing and insulation. Sand bags were placed beneath the piping between MW-3S and MW-5S to produce the proper line pitch on Tuesday July 7, 1992.

REVISED WEEKLY PROGRESS MEETING MINUTES
JULY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o Work scheduled for this week includes:
 1. Complete insulation of the containment piping.
 2. Install the tank heaters and wire to the control panel.
 3. Install additional barbed wire requested by EPA.
 4. Remove dumpster from site when electrical and insulation work is completed.
 5. Cut back one taller sheetpile to match neighboring ones.
 6. Put locks on the recovery well box lids.
 7. Continue removal of recovered groundwater from the site.
- o Canonie had planned to have no one on-site after Wednesday afternoon July 8 until Monday morning July 13. Both Langan and ICF indicated this was unacceptable and that Canonie should provide someone for supervision of the remaining on-site work. Canonie did make arrangements for personnel to cover this time period.

3.0 Health and Safety

- o Level D was utilized for all work. The HNu was used during transfer of recovered water from the holding tank to the trucks to monitor air around the truck. All readings were 0-1 ppm above background.

4.0 QA/QC

- o A discussion was held on the destructive testing requirements in the QAPP for the infiltration barrier seams. Approximately 18400 feet of seam were made by the 2 pieces of seaming equipment. The specification states a test to be done per 1000 feet of seam or

REVISED WEEKLY PROGRESS MEETING MINUTES
JULY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

fraction of 1000. Only 17 destructive tests were performed.

Three options were provided to Canonie: 1. Perform 2 more destructive tests with the equipment used on-site; 2. Perform 2 more destructive tests on the archive samples, or; 3. Submit a modification request for a change which provides a technical justification for accepting the 17 test results as indicative of acceptable quality of the infiltration barrier seams. Canonie will evaluate these options.

- o Canonie needs to supply to Langan the air pressure test data obtained while testing the one inch carrier line.

5.0 Miscellaneous and Old Business

- o Langan asked Canonie to examine the rain shield around the holding tank and prevent water from entering the dike area which would require removal off-site.
- o The Liner Company will be on-site July 13, 1992 to repair miscellaneous punctures and a ballast tube. ICF mentioned there was an additional ballast tube leaked and this also will be repaired.
- o The rolloff box containing the PPE needs to be classified as hazardous or non-hazardous before removal from the site. Langan will speak with Cheryl Williams in Canonie's King of Prussia office to determine what input, if any, Langan needs to supply at this time to move the rolloff from the site.
- o The trash dumpster will remain on-site until all installation work is completed and then it will be removed.
- o The remaining installation work was estimated by Canonie to be approximately one day to install the tank heaters and three days to complete installation of the pipe insulation.
- o Barbed wire still needs to be placed along the perimeter fence where Pat Evangelista had indicated.
- o The advisory notice on the use of air pressure to test

REVISED WEEKLY PROGRESS MEETING MINUTES
JULY 7, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

the one inch carrier line is being prepared.

- o Canonie will provide a firm date for receipt of the backdrain valves so plans can be made for their installation.
- o A post from the old perimeter fence is located on-site near Gotham Parkway and needs to be removed.
- o No firm date is available for the permanent power drop to the meter; Boublis Contracting has tried daily to get a firm date from PSE&G.
- o No determination has been received from the EPA on the issue of signs attached to the perimeter fence.
- o The next progress meeting will be Tuesday July 14, 1992 at 3:30 P.M. It is planned this will be the last if all items are addressed.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

WEEKLY PROGRESS MEETING MINUTES
JULY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198

1.0 Review and Approval of Meeting Minutes from Previous Week

- o Revised Weekly Progress Meeting Minutes for June 16, June 23, and June 30, 1992 were distributed and approved. Weekly Progress Meeting Minutes for July 7, 1992 were distributed. Minor edits were requested and these will be incorporated.

2.0 Schedule and Progress Review

- o The following work was performed during the previous week:
 1. S/J Transportation removed 5400 gallons of recovered ground water off-site. Installation of the heat tracing was completed. Insulation materials on-site were installed; remaining material was delivered to the wrong site and delayed completion of work on Wednesday July 8, 1992.
 2. S/J Transportation removed 5700 gallons of recovered ground water off-site. Silt fence scraps were removed from the northeast corner of the site plus a piece of HDPE from along Peach Island Creek. More sand bags were fabricated for piping support on Thursday July 9, 1992.
 3. S/J Transportation removed 5500 gallons of recovered ground water off-site. Insulation work continued after material arrived on-site. Tank heaters arrived on-site and were installed in the 10,000 gallon holding tank on Friday July 10, 1992.
 4. S/J Transportation removed 5950 gallons of recovered ground water off-site. Pipe insulation work continued. Electric wiring was run to the tank heaters. The Liner Co. was on site to repair miscellaneous pinholes, repair the boot around P-9, and repair 2 of the ballast tubes. The tubes were later refilled. Removed an old fence post from the northwest corner of the site. Relocated rolls of geomembrane and HDPE from the southwest corner to area between the on-site buildings. Cut down the two sheetpiles which extended above the wall east of the sludge pile on Monday July 13.

WEEKLY PROGRESS MEETING MINUTES
JULY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

5. S/J Transportation removed 5450 gallons of recovered ground water off-site. Additional barbed wire installed in southeast corner. Pipe insulation finished. Sand bags distributed where needed and excess stored near on-site building. Wiring for tank heaters completed on Tuesday July 14, 1992.
 6. S/J Transportation removed 5000 gallons of recovered ground water off-site. Adjusted and caulked rain shield. Installed locks on recovery wells. Cleaned out old trash dumpster near on-site building. Placed more sand bags between well MW-1S and the junction Tee. Replaced one ballast tube on Wednesday July 15, 1992.
- o Work scheduled for this week includes:
1. Canonie to notify Langan when PSE&G connects power to the meter.
 2. Portable toilet to be removed from site by Thursday or Friday July 16 or 17.
 3. Canonie to continue working with IT to have PPE rolloff taken off-site.

WEEKLY PROGRESS MEETING MINUTES
JULY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

3.0 Health and Safety

- o Modified Level D was utilized for all work.

4.0 QA/QC

- o Air pressure results were forwarded to Langan on the 1 inch carrier pipe.

5.0 Miscellaneous and Old Business

- o According to vendor, back drain valves will be shipped to Canonie on August 10, 1992. Canonie will provide Langan with a 2 day advance notice when they arrive.
- o May and June site photographs will be sent out this week.
- o Advisory notice for the air test of the 1 inch carrier line will be sent this week.
- o Canonie will submit a modification request with justification for acceptance of the QA/QC destructive testing performed during installation of the infiltration barrier.
- o ICF asked about the contents in the old dumpster and if these were generated during construction would need to be removed off-site.
- o Canonie will notify Langan, at least 24 hours in advance, of the removal of the PPE rolloff.
- o Langan would like to have S/J Transportation arrive at site around 10:30 AM to remove the recovered ground water. A Langan representative will bring a key to unlock the gate each time. S/J will be given Langan's phone number if any problems arise with the trucking.
- o No input from the EPA about signs for the perimeter fence.

WEEKLY PROGRESS MEETING MINUTES
JULY 14, 1992
SCP CARLSTADT SUPERFUND PROJECT
90-198
(Continued)

- o ICF indicated there was no response from the EPA on the cutting of the two sheet piles, adjacent to the sludge pile, to their proper elevation.
- o No more progress meetings will be held.

cc: Progress Meeting Attendees per Attachment #1
Pat Evangelista - EPA
Pam Lange - NJDEPE
Curt DeWolf - Canonie
Joseph E. Mihm - Canonie
Jim Semple - Canonie

APPENDIX E
AS BUILT DRAWINGS

100994

CanonieEnvironmental

APPENDIX E
AS-BUILT DRAWINGS

Thirteen drawings, indicating the Interim Remedy as built, were provided to EPA under separate cover on 28 August 1992. These drawings were prepared under the direction of Mr. Jeffrey A. Klaiber, P.E. of Canonie and were reviewed and approved for the Cooperating PRP Group by Dr. Donald J. Murphy, P.E. of LESI.

Certification of As-Built Drawings

Jeffrey A. Klaiber, P.E.
Project Manager
Canonie Environmental Services Corp.


New Jersey P.E. #34051

Donald J. Murphy, P.E.
Facility Coordinator
Langan Environmental Services, Inc.


New Jersey P.E. #16917

APPENDIX F

LESI PROGRESS REPORTS - JULY AND AUGUST 1992

100997



ELMWOOD PARK, NJ
NEW YORK, NY
MIAMI, FL
W PALM BEACH, FL
DOYLESTOWN, PA

EPA
Progress Report

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
(201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
(212) 432-7885

10 August 1992

Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site

Re: Progress Report - July 1992
Interim Remedy
216 Paterson Plank Road Site
Carlstadt, New Jersey

Gentlemen:

Attached are four copies of the July 1992 Progress Report for the Interim Remedy for the 216 Paterson Plank Road Site. The report was prepared by me in accordance with Paragraph 151 of the Administrative Order No. II CERCLA-00116.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator

Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

100998

**216 PATERSON PLANK ROAD SITE
INTERIM REMEDY PROGRESS REPORT
JULY 1992**

STATUS AND PROGRESS

- Construction of the Interim Remedy was substantially completed by 15 June 1992. At that time, a few minor construction and/or maintenance related items still required attention. Most of these were cared for during the period from 15 June through 31 July 1992. As of 31 July 1992, two minor items were yet to be completed: 1) installation of backdrain valves in Well Nos. MW-2S, MW-5S, and MW-6SR (to be completed by 10 August 1992), 2) offsite transport of PPE rolloff (to be completed by 21 August 1992)
- Demobilization was completed on 15 July 1992
- Dewatering continued throughout July 1992. Details pertinent to volumes transported offsite are provided in the Attachment

PLANNED ACTIVITIES

AUGUST

- Continuation of dewatering
- Submission of Notice Of Completion And Final Report

SEPTEMBER

- Continuation of dewatering

OCTOBER

- Continuation of dewatering

**ATTACHMENT
216 PATERSON PLANK ROAD SITE
FOU DEWATERING SUMMARY
JULY 1992**

GROUNDWATER EXTRACTED AND SHIPPED OFFSITE

PREVIOUSLY	30,418 gallons
THIS MONTH	90,547 gallons
TOTAL THROUGH THIS MONTH	120,965 gallons

TIME PUMPED

PREVIOUSLY	15 days
THIS MONTH	31 days
TOTAL THROUGH THIS MONTH	46 days

OPERATIONAL PROBLEMS/CORRECTIVE ACTIONS

NONE

**Langan
Environmental
Services, Inc.**

River Drive Center 2
Elmwood Park, NJ 07407
201) 794-6969

292 5th Avenue, Suite 401
New York, NY 10001
212) 432-7885

9 September 1992

**Chief, New Jersey Compliance Branch
Emergency and Remedial Response Division
EPA Region II
26 Federal Plaza - Room 747
New York, New York 10278
Attn: Project Manager - 216 Paterson Plank Road Site**

**Re: Progress Report - August 1992
Interim Remedy
216 Paterson Plank Road Site
Carlstadt, New Jersey**

Gentlemen:

Attached are four copies of the August 1992 Progress Report for the Interim Remedy for the 216 Paterson Plank Road Site. The report was prepared by me in accordance with Paragraph 151 of the Administrative Order No. II CERCLA-00116.

Very truly yours,

LANGAN ENVIRONMENTAL SERVICES, INC.

Facility Coordinator



Dr. Donald J. Murphy, P.E.
President

DJM:mg
Attachment

- cc: 1) Chief, Bureau of Federal Case Management (4 copies)
Division of Hazardous Waste Management
N.J. Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
Attn: Case Manager - 216 Paterson Plank Road Site
- 2) Mr. W.L. Warren - CSPS&C

**216 PATERSON PLANK ROAD SITE
INTERIM REMEDY PROGRESS REPORT
AUGUST 1992**

STATUS AND PROGRESS

- Dewatering continued throughout August 1992. Details pertinent to volumes transported offsite are provided in the Attachment.
- A Notice Of Completion And A Final Report were submitted to the USEPA and the NJDEPE on 28 August 1992.

PLANNED ACTIVITIES

SEPTEMBER

- Continuation of dewatering
- Second round of Quarterly Monitoring

OCTOBER

- Continuation of dewatering

NOVEMBER

- Continuation of dewatering

**ATTACHMENT
216 PATERSON PLANK ROAD SITE
FOU DEWATERING SUMMARY
AUGUST 1992**

GROUNDWATER EXTRACTED AND SHIPPED OFFSITE

PREVIOUSLY	120,965 gallons
THIS MONTH	31,215 gallons
TOTAL THROUGH THIS MONTH	152,180 gallons

TIME PUMPED

PREVIOUSLY	46 days
THIS MONTH	31 days
TOTAL THROUGH THIS MONTH	77 days

OPERATIONAL PROBLEMS/CORRECTIVE ACTIONS

NONE